Ontario

RYERSON UNIVERSITY

Ministry of Training, Colleges and Universities

Institutional Vision, Proposed Mandate Statement and Priority Objectives

A submission to begin the process of developing strategic mandate agreements (SMAs):

To:

The Honourable Glen Murray
Minister of Training, Colleges and Universities
The Ministry of Training, Colleges and Universities

From:

Sheldon Levy
President
Ryerson University

Response Template

Part 1: Ryerson University - Proposed Mandate Statement

Ryerson University is a centre of innovation and entrepreneurship providing students with professional and career-related bachelor, master's and doctoral programs that meet societal need, and advancing knowledge through scholarly, research and creative activities.

Ryerson is student focused, providing an innovative emphasis on entrepreneurship, creativity, experiential learning, continuing education, online learning, and transfer pathways from colleges and other universities. Ryerson is an inclusive, diverse learning community. In its role as a City Builder, Ryerson enhances access and has a positive, transformative effect on its neighbourhood and the broader community.

Institutional Transformation: Ryerson's distinctive path of institutional transformation is consistent with its mission to meet societal needs.[1] Since becoming a university in 1993, it has evolved from an undergraduate polytechnic to a comprehensive university with an array of undergraduate, master's and doctoral programs and related scholarly, research and creative activities (Appendix Figure 1). Ryerson's strength is its focus on professional and career-related disciplines. Two-thirds of its undergraduate students are in professionally accredited programs (Appendix Table 2). Continued transformation is integral to Ryerson's mandate.

Unique Program Mix and Distinctive Delivery: Ryerson trusts students to learn. Highly effective methods of teaching and experiential learning encourage "deep learning" in lab, studio, clinical and workplace settings. Zone education, research projects, and collaborations with community and industry partners challenge students to become innovators and entrepreneurs and to meet the demands of the labour market.

Access: Ryerson is committed to student access, supporting students from marginalized backgrounds, facilitating transfers from colleges and other universities, educating adult learners and providing flexible online learning.

Productivity Enhancement: As outlined in Appendix Table 3, Ryerson is engaged in a broad array of productivity initiatives to improve its quality of service and delivery while reducing costs. Ryerson is committed to enhancing the economic productivity of Ontario and Canada. Ryerson's entrepreneurial zone model produces student entrepreneurs who in turn create jobs in a highly efficient manner.

Guided by its mandate and the needs of Ontario's and Canada's economy, Ryerson's continued transformation will focus on its priority objectives of **Economic Innovation**, **Educational Innovation**, and **Community-Institutional Innovation**.

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[1] **Ryerson University Mission Statement (1994):** The special mission of Ryerson University is the advancement of applied knowledge and research to address societal need, and the provision of programs of study that provide a balance between theory and application and that prepare students for careers in professional and quasi-professional fields.

As a leading centre for applied education, Ryerson is recognized for the excellence of its teaching, the relevance of its curriculum, the success of its students in achieving their academic and career objectives, the quality of its scholarship, research and creative activity and its commitment to accessibility, lifelong learning, and involvement in the broader community.

Part 2: Ryerson University – Vision

Ryerson University is a comprehensive innovation university, recognized as a national leader that will continue to foster excellence in professional and career-related education and relevant research.

Ryerson will expand its strong foundation of distinctive academic programs and related scholarly, research and creative activities, producing graduates who understand innovation and enable change. Ryerson will be a national leader in entrepreneurial zone education, experiential learning, technology-enhanced course content, online education, and transfer pathways. As a City Builder, Ryerson will build partnerships that foster social and cultural innovation and economic development. Ryerson's students, graduates and faculty will contribute to Ontario's and Canada's economic, social and cultural well-being and promote innovation and entrepreneurship.

Ryerson's core mission rests on its relevant academic programs and scholarly, research and creative activity to meet societal needs. Ryerson's bold transformation will meet the emerging needs of students and help shape Ontario's and Canada's social, cultural and economic future. As the next step in its evolution, Ryerson will enhance and expand its distinctive educational model to foster innovation and entrepreneurship, especially through zone-based education. By expanding experiential learning opportunities and embedding innovation across its entire curriculum, Ryerson's career-relevant university education will better meet emerging labour market needs. New technologies and expanded online education will improve the learning experience and enhance access. Ryerson will promote inclusion through clear pathways for transfer students, outreach initiatives and support for marginalized individuals, and specialized services and priorities such as bridging programs for internationally educated professionals.

Through its innovation and entrepreneurship strategy, Ryerson will foster creative economy jobs at a fraction of present costs, redefining the role of postsecondary education in driving economic productivity and growth. Ryerson will partner with the private sector and government to attract to downtown Toronto the best, brightest, most ambitious innovators from around the world.

Part 3: Ryerson University - Priority Objectives

Priority #1: Economic Innovation – ***To provide a platform for entrepreneurial innovation that serves as a magnet for the brightest students and faculty innovators.***

The new creative economy is characterized by innovation and entrepreneurship. By expanding its unique zone model, broadening its suite of professional and career-related graduate programs, and advancing applied knowledge through relevant research, Ryerson will help drive innovation in Ontario and Canada. Ryerson will act as a leader in zone education, sharing its expertise to assist Ontario institutions in enabling change. This priority objective advances each of the principles of the Government's vision. It is student focused, offering improved quality, new approaches to learning, and new professional and career-relevant programs. It will foster industry and community partnerships and provide talent for the creative economy. And it addresses the need for productivity, innovation and sustainability by providing cost-effective job creation in the form of students and graduates who create employment for themselves and others. In support of this initiative, Ryerson requests the following:

PROPOSAL 1A - ENTREPRENEURIAL ZONES FUNDING: ***Ryerson University requests that the operating grants formula be modernized to make students registered in Ryerson's "zone education" program eligible for funding within the Undergraduate Accessibility Grants envelope at a BIU weight of 2.0 under the approach outlined in Appendix Figure 2.***

PROPOSAL 1B - GRADUATE EXPANSION FUNDING: ***Ryerson University requests that its funded graduate enrolment target be increased by 750 Fall FTE master's spaces and 260 Fall FTE doctoral spaces by 2017-18, and that associated new career-relevant programs be approved by the Government.***

Entrepreneurial Zones: Ryerson's Digital Media Zone (DMZ) plays a leading role in expanding entrepreneurial education in Ontario with its incubator environment in which students develop business plans, create commercial or non-profit products and services, and develop start-up ventures. Since its launch, the DMZ has incubated and/or accelerated 51 start-ups, and there are currently over 200 innovators in the zone. The DMZ attracts top innovation and entrepreneurial talent from around the world to Toronto, helping to build the GTA's digital media industry[2]. Appendix Table 4 provides a list of DMZ companies. Still in its early stages, Ryerson's new Innovation Centre for Urban Energy (iCUE) is an incubator and accelerator for green energy enterprises, developing and commercializing innovative sustainability solutions.

The entrepreneurial zone model builds on Ryerson's track record of integrating innovation, entrepreneurship and experiential learning into its educational culture. By working closely with industry and community partners, Ryerson students and faculty are having a significant impact in sectors such as health and biomedical sciences, energy, environment and sustainability, aerospace, design and culture, and civil society. A total of 80 Ryerson courses already include innovation, entrepreneurship, or commercialization modules. The entrepreneurial zones add the new dimension of fostering creative economy companies and student-created jobs.

Zone based education will improve the Province's and Canada's economic productivity through innovation. Ryerson's zone-based approach to innovation and entrepreneurship is an effective generator of creative economy jobs. The zone model cultivates innovators who create jobs for others. DMZ start-ups have already created hundreds of jobs.

Within the next two years, Ryerson plans to add entrepreneurial zones in fields where it is already an established educational leader: Aerospace, Design, Health, and Social Entrepreneurship, and to expand zone education from the current 200 spaces to 800 spaces (i.e., from 600 one-term spaces to 2,400 one-term spaces per year), with a target of 10% of graduating students having been involved in the development of a company, product or service. Ryerson has invested heavily in the DMZ within a challenging fiscal environment, and has attracted and leveraged private sector funding to support the DMZ's operations. Investors and industry partners also provide financing for individual DMZ teams. However, to further expand zone education, Ryerson requires stable base funding from the Government.

Expanded access to zone education should be funded through Undergraduate Accessibility Grants. Students would be formally registered each term in entrepreneurial zones, counted and audited for BIU purposes, evaluated, and given formal recognition on their transcripts. Registrants would thus be seamlessly funded through growth in grants already planned by the Government in a manner that ensures rigorous data collection and accountability. The proposed funding mechanism is described in Appendix Figure 2.

Growing Professional and Career-Relevant Graduate Studies: Growth in career-related graduate programs is essential to Ryerson's continued transformation to a comprehensive innovation university. Since its introduction of graduate studies in 2000, Ryerson has added 42 master's and 13 doctoral programs, and currently has 2,400 graduate students (or 1,860 Fall FTEs) enrolled (see Appendix Table 5). Appendix Figure 3 and Appendix Table 6 illustrate the expected evolution of graduate programs at Ryerson through 2017-18.

Over the next five years, Ryerson proposes to grow its funded professional master's enrolment in 12 new degree programs and Master's Professional Diplomas by 750 FTEs, and PhD and Doctoral Diploma enrolment by 260 FTEs. This expansion will build on existing strengths, have strong links to industry and the community, and include programs in areas critical to the economy[3]. Most of the PhD growth (86%) is catch-up for current unfunded spaces and flow-

[2] The DMZ includes Ryerson students and alumni from programs in engineering, business, arts, and fashion, as well as students from other Canadian universities and top international universities such as IIT Delhi, IIT Chennai, the Indian School of Business (Hyderabad), Communication University of China, and Nanjing University.

[3] **Master's programs:** Animation, Biomedical Engineering, Business Intelligence and Data Analytics, Child and Youth Care, Construction Project Management, Cyber Security, Digital Media, Dramatic Writing, Energy and Innovation, Facility Management, Interior Environments, Occupational Health and Safety, Master's Professional Diplomas. **Doctoral programs:** Financial Mathematics, Urban Planning, Type 2 Doctoral Diplomas. **Master's programs at**

through of existing PhD programs' intake levels, with the remainder coming from two new programs. Ryerson's new graduate programs are described in Appendix Table 7.

Planned graduate growth at Ryerson is part of a global trend among major universities that were formerly polytechnics. With 7% of its total enrolment in graduate studies, Ryerson lags behind its international peers in the United Kingdom (21%) and Australia (26%) that transformed from polytechnics to universities in the late 1980s or early 1990s (see Appendix Table 8). The much higher proportion of graduate enrolment at these peer institutions reflects their countries' recognition of the social and economic need for professional and career-related graduate education.

Ryerson has a solid foundation of scholarly, research and creative activity, ranking 6th in sponsored research funding among Ontario universities in 2010, and 14th nationally among non-medical/doctoral universities (Appendix Table 9). Its graduate programs include extensive collaboration with industry and community partners (Appendix Table 10). Innovation requires a strong research culture and an ability to leverage creative assets to generate economic growth. Ryerson is well positioned to help drive economic innovation in Ontario and Canada by expanding its scholarly, research and creative activities, particularly in areas of innovation and collaboration with industry, and by maximizing links between these activities and its incubators.

Progress Metrics: Ryerson proposes to track its success against this objective as follows:

- **Entrepreneurial Zones:** Annual number of jobs created by zone firms; Number of companies or social innovation initiatives incubated and/or accelerated; FFTE enrolment in zone education.
- **Graduate Studies:** Fall FTE master's and doctoral enrolment; Time to completion in master's and doctoral programs.

Productivity Enhancements: Ryerson is committed to fiscal sustainability and is continually improving efficiencies in administration, teaching and research. Productivity enhancements that support Ryerson's ability to promote economic innovation, grow graduate programs and support research include:

- Make the fourth year of Doctoral student financial support conditional on completion in four years in order to improve time-to-completion. *[productivity metric – doctoral student time to completion]*
- Introduce a financial incentive model to intensify instructional lab utilization, enabling conversion of underutilized space to research and graduate studies laboratories or other high-demand uses, as well as incentives to share facilities. *[productivity metric – average instructional lab hour utilization per week]*
- Introduce a new document management system for graduate and undergraduate admissions, transfer processes and records-keeping to improve administrative efficiency.

Priority #2: Educational Innovation – *To transform the University's curriculum and its delivery to further improve educational quality and maximize students' readiness for the creative economy.*

Ryerson University will continue to improve the quality of its academic programs by expanding experiential and technology-enhanced learning, enhancing student choice, ensuring students are digitally literate and providing doctoral students with strong management and leadership skills. This priority objective advances the Government's vision by expanding student choice, offering new technologies and approaches to learning, and preparing graduates to succeed in the workplace. Educational innovation will build on Ryerson's existing strengths. In support of this priority Ryerson requests the following:

PROPOSAL 2A - TECHNOLOGY-ENHANCED COURSE DELIVERY FUNDING: ***Ryerson University requests that $1.5 million per year be provided over 5 years to expand technology-enhanced learning opportunities through the upgrading of 75 degree program courses per year.***

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an earlier stage of development: Diversity and Locality in Global Contexts, Film Preservation, Financial Analysis, Globalizing Knowledge, Safety Engineering, Urban Food Security. **Doctoral programs at an earlier stage of development:** Biomedical Engineering, Business, Digital Media, Disaster and Emergency Management, Early Childhood Studies, Immigration and Settlement, Nursing, Social Work, Urban Energy.

Initiatives to Improve Teaching Quality: Ryerson's commitment to enhanced teaching and learning is continuous and comprehensive. The University offers workshops for faculty on a broad range of teaching issues, including skills for assessment and teaching large classes. Close to two-thirds of Ryerson's tenure-track faculty members attended this spring's annual teaching and learning conference. Each Faculty in the University has a Teaching Chair who provides leadership and advice to faculty members on classroom teaching practices. The Open Door program allows new faculty members to attend classes taught by award-winning teachers to learn best practices, and a Learning and Teaching Effectiveness Fund has been established to support development of innovative approaches to teaching. An annual orientation for teaching assistants is complemented by workshops offered throughout the year on topics such as planning effective tutorials, facilitating discussions, and accommodating students with disabilities.

Improving Undergraduate Time to Completion: Ryerson is committed to improving undergraduate time to completion through expanded year-round course availability (using facilities more effectively in the Spring and Summer), prior learning assessment and online delivery. In the past decade, Spring/Summer course registrations have increased by about 85% to 31,000 in 2012 (just under one quarter of Winter term registrations). Currently, 16% of Ryerson undergraduate students complete their four-year program in less than four academic years (70% of these students received prior credit recognition). With two-thirds of Ryerson undergraduate enrolment in accredited programs (see Appendix Table 2), consultations on reducing degree requirements to three years would have to take place with not only students and faculty, but also several accrediting agencies.

Expanding Experiential Learning: Experiential learning, central to Ryerson's mission, emerges from a carefully designed mix of activities and environments including co-op, internship, service learning, clinical placements, practica, lab work, field study, and simulations. Over 90% of undergraduate programs at Ryerson include experiential learning (Appendix Table 11) and over 130,000 student registrations are in courses with an experiential learning component. Ryerson will further embed experiential learning as a defining component of its undergraduate and graduate programs. For example, expansion of co-curricular/extra-curricular experiential learning and social innovation opportunities will challenge students to develop novel solutions to address social issues and problems, building on existing experiential learning in programs such as Social Work.

Expanding Technology-Enhanced Course Delivery: Technology-enhanced learning provides students with a richer and deeper educational experience. Ryerson has a unique set of resources to address the technical, pedagogical and curricular challenges of integrating technology-enhanced learning into existing course content. Ryerson has developed and implemented interactive tools such as online role-playing modules, response-driven quizzes, interactive case studies, competency mapping, communication assessments, interactive tours and videos. The University currently offers a range of courses featuring technology-enhanced learning through hybrid and blended delivery that provides students with a mix of online and in-class instructional delivery. Eight international institutions use Ryerson's open-source videos to deliver learning.

While the University has a strong underlying infrastructure to advance technology-enhanced education, developing enhanced content requires significant initial investment. Ryerson requests Government funding to accelerate the process of delivery transformation, to upgrade 75 degree courses per year over 5 years. This investment will support quality by providing a richer learning environment for students, increasing opportunities for interaction with instructors and classmates, and enhancing productivity by allowing instructional time to be used in a more efficient and focused manner.

Curricular Renewal: Ryerson's polytechnic roots have influenced not only its mix of programs but also the structure of its curriculum, which has been highly prescribed to meet accreditation, professional and labour market needs. However, the career paths of graduates are increasingly changing. Students need flexibility to tailor their programs to meet their career goals and the rapidly changing economy they face after graduation. Ryerson is implementing a new

undergraduate curricular framework, approved by University Senate in June 2011, to improve student choice and enable specializations that flexibly adapt to changing economic conditions.

Digital Preparedness for All Students: Ryerson is in the process of implementing digital literacy opportunities across its curriculum, a new initiative that will enhance student career opportunities by providing workplace skills. The starting point is an open elective in digital literacy that is available to all students and also serves as a gateway to the Digital Media Zone and other experiential opportunities. This initiative will engage students in the process of analyzing, evaluating and utilizing digital technologies.

Doctoral Education Beyond the Thesis: Ryerson plans to develop a platform of Type 2 Doctoral Diplomas that would be open to students in Ryerson's existing Ph.D. programs to enable concurrent pursuit of advanced professional education. This initiative is a response to increasing demands to prepare graduates for non-academic careers in a host of sectors. Ryerson's Doctoral Diplomas will incorporate content knowledge and skill sets required in areas such as business, finance, strategic planning, and project management.

Progress Metrics: Ryerson proposes to track its success against this objective as follows:

- **Improving undergraduate time to completion:** Proportion of undergraduate students graduating in less than four academic years.
- **Expansion of technology-enhanced instruction:** Student surveys evaluating improvements in pedagogical effectiveness of technology-enhanced instruction.
- **Expanded experiential learning:** Number of student registrations in experiential learning activities.
- **Digital literacy education that is available to all students:** Number of student registrations in courses with digital literacy components.

Productivity Enhancements: Ryerson will leverage existing strengths and introduce new initiatives to achieve higher levels of productivity in driving educational innovation. Productivity-enhancing initiatives include:

- Streamline the faculty teaching assignment and timetabling process to reduce administrative overhead, improve accuracy and timeliness of students' timetables, and optimize faculty teaching assignments.
- Draw upon existing expertise in developing online courses to streamline the development of technology-enhanced course content across the University. *[productivity metric – content development time].*

Priority #3: Community-Institutional Innovation – *To be a City Builder and address societal need through neighbourhood transformation and expanded access to career-relevant education with new programs, pathways and online learning.*

Ryerson will enhance its impact as a City Builder by championing access and neighbourhood transformation. In conjunction with the Online Institute it will continue to play a leadership role in the Province in online education, and will share its expertise in online learning and transfer pathways to support other Ontario institutions. Priority objective #3 advances the Government's vision of student choice and mobility by adding professional and career-relevant undergraduate programs and enhancing access. It meets the needs of the creative economy by preparing students for the workforce and fostering community partnerships. And it advances the Government's priorities of productivity, innovation and sustainability by promoting innovative partnerships to expand the University's physical and digital footprint. In support of this priority Ryerson requests the following:

PROPOSAL 3A - UNDERGRADUATE PROGRAM GROWTH: ***Ryerson requests approval for funding eligibility for the professional and quasi-professional programs planned to commence in 2013-14: Creative Industries, Real Estate Management, and Professional Communication.***

PROPOSAL 3B - ACCESS, PATHWAYS AND BRIDGING FUNDING: ***Ryerson requests conversion of $3.23 million OTO funding to ongoing base funding to ensure the continued success of pathway and support programs.***

PROPOSAL 3C - ONLINE LEARNING: ***Ryerson University requests $2 million annually for five years to support the incremental costs of expanding the number of online courses created to 120 annually.***

City Building

Ryerson plays a unique role as a City Builder in the GTA, enabling a constructive community transformation by improving the urban ecosystem, fostering economic growth, enhancing the city's social and cultural fabric, and building enduring relationships with community organizations, industry, and government. Ryerson proposes several initiatives to expand its City Building role: neighbourhood transformation, undergraduate program growth, support for disadvantaged students, bridging for internationally educated professionals, and continuing leadership in transfer pathways for college and university students.

Neighbourhood Transformation: Ryerson's Master Plan has been a catalyst for downtown renewal, integrating educational environments within a mixed-use urban setting. Ryerson has completed the Ryerson Image Centre, reinvented Gould Street as a pedestrian plaza, and opened the Mattamy Athletics Centre in the former Maple Leaf Gardens. Construction of a new Student Learning Centre on Yonge Street is underway, and a Health Sciences Building and new student residences are in the planning stages. Ryerson's capital expansion has involved partnerships with government and private sector partners like Loblaw Companies, AMC Theatres, Cadillac Fairview, and MPI Group. These projects attract students, researchers and faculty to the University. They also attract businesses and investment to downtown Toronto.

Location is one of Ryerson's strengths. The University must purchase land for future development. The Government's sale of 222 Jarvis Street provides a unique opportunity for the University to land bank the only substantial undeveloped parcel of land within its precinct for its development over the next twenty years.

Undergraduate Program Growth: Ryerson's role as a City Builder includes the provision of programs to accommodate GTA demand and meet labour market needs for highly-qualified graduates. Ryerson's programs are in high demand, with a 72% increase in first-choice applications and 54% increase in all-choice applications since 2004 (Appendix Figure 4). Its applications to registrant ratio of 9.7 to 1 is the highest in the Province (see Appendix Figure 5). Ryerson's ranking among Ontario universities in the proportion of students with an entering grade of 80% or higher went from 14th in 2006 to 6th in 2011 (see Appendix Table 12). Labour market outcomes for Ryerson graduates are strong: 84% of graduates were employed in a career related to their field six months after graduation (Class of 2009), 17% higher than the Ontario university system average.

In response to increasing demand, Ryerson plans to grow undergraduate enrolment by 3,600 FFTE students by 2017-18 and will add six undergraduate programs starting in 2013 in innovative relevant fields[4]. Growth plans and descriptions of planned undergraduate programs are shown in Appendix Tables 13 and 14. Ryerson requests approval for funding eligibility for the programs planned to commence in 2013-14.

Student Transfers: Ryerson is one of the most transferred-to universities in the Province (see Appendix Table 15). In 2011-12, 28% of undergraduate students at Ryerson had previous college or university experience. New collaborations with colleges such as George Brown and Centennial will explore partnerships in engineering education and pathways for students and upgrade the skills of mid-career and internationally trained engineering technology professionals. Ryerson will also collaborate with these colleges on incubator opportunities for students, research and programs, and effective utilization of advanced prototyping facilities and equipment.

Access, Pathways and Bridging: Ryerson has a strong commitment to providing support for underrepresented groups, in particular First Generation students, Aboriginal people, persons with disabilities and internationally

[4] **Undergraduate Programs to start in 2013:** Entrepreneurial Zones, Creative Industries, Financial Mathematics, Professional Communication, Real Estate Management, Philosophy, Biomedical Sciences. **Programs at an earlier stage of development**: Food Practice and Innovation, Game Development and Design, Languages and Intercultural Communication, Sport Media, Visual Studies and Design.

educated professionals. Initiatives include bridging internationally educated professionals to the labour market, supporting students through educational counseling, community outreach, academic upgrading and workplace training and connections. However, funding for many of these vital initiatives is available only on an OTO basis, creating ongoing uncertainty. Converting existing Special Access Grants to base funding will ensure future viability and equip marginalized individuals for future success.

Online Learning and Distance Education

Ryerson is a leader in online university education in Ontario, offering 282 degree-credit courses, 186 non-credit courses, 3 degree programs, and 23 certificates fully online, as well as 5 blended degree programs and 20 blended certificates. Ryerson's substantial investment in online course infrastructure enables the cost-effective development of 50 to 60 new online courses annually. Appendix Figure 6 shows the percentage of courses available online in Ryerson's undergraduate programs. All of Ryerson's online course content will be AODA compliant by Spring 2013. To support the Government's commitment to expanding online learning, Ryerson will provide leadership and share expertise in online learning with other institutions. As an active participant in the Ontario Online Institute, Ryerson will double its annual creation of online courses, thus increasing the number of full degrees offered online. It targets producing 120 new online courses per year for five years, bringing Ryerson close to Athabasca University's number of online offerings. OTO funds will be required to support this acceleration.

Progress Metrics: Ryerson proposes to track its success against this objective as follows:

- **City Building:** Relative increase in property values in Ryerson's neighbourhood compared to GTA; Number of City Building/community partnerships; Student hours in community.
- **Undergraduate growth and new career-relevant programs to accommodate GTA demand and meet labour market needs:** FFTE undergraduate enrolment.
- **Pathways for transfer students:** Number of transfer students from colleges and universities.
- **Online Learning and Distance Education:** FFTE enrolment in fully-online courses; Number of fully-online courses; Proportion of each undergraduate degree program that can be completed online.

Productivity Enhancements: Productivity-enhancement initiatives that support Ryerson's ability to promote City Building and expand online education include:

- Make more effective use of the University's physical plant over the entire academic year in undergraduate programs. *[productivity metric – Spring/Summer courses, registrations]*
- Re-engineer processes to enable more efficient development of online courses. This innovation has already resulted in a doubling of course output in a single year. *[productivity metric – online course development times]*
- Migrate paper-based and manual processes for continuing education certificate and course series to online processes to improve services for adult learners.

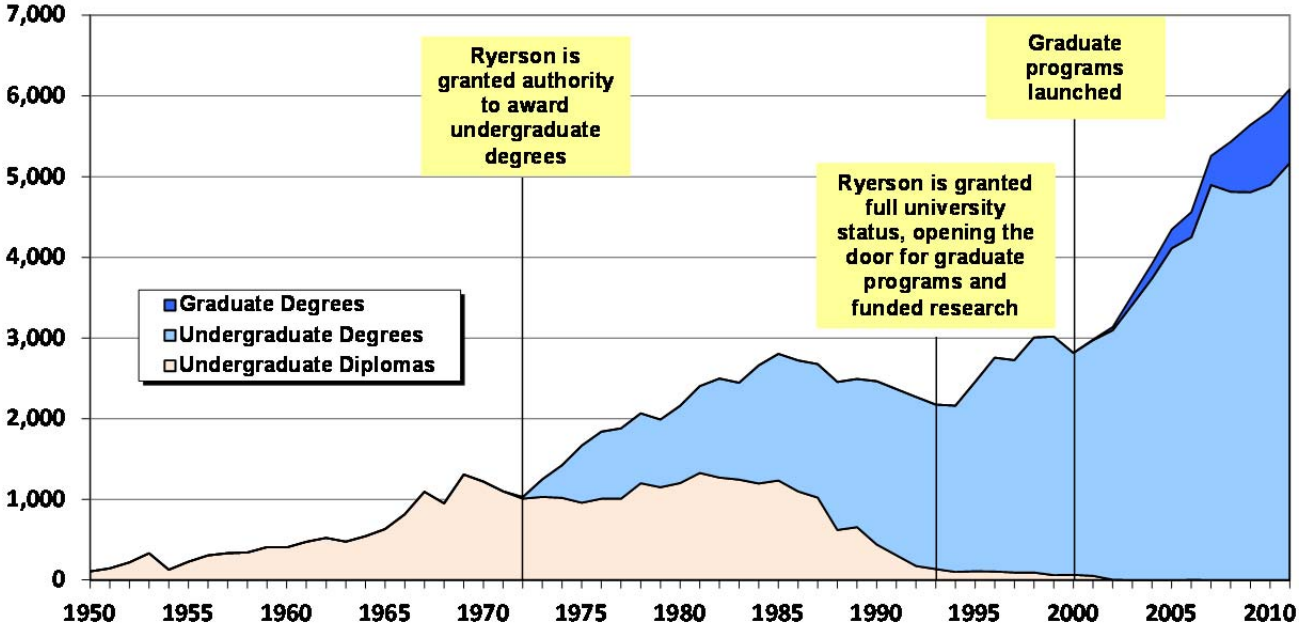
Upgrade and expand the Library's capabilities in support of online learning, such as digital collections and access to e-resources, enhancing access to resources with very efficient use of space.

Ryerson University Strategic Mandate Agreement Appendix

Appendix Table 1: Fact Sheet

Student Demand • Ryerson University received nearly 72,000 total applications (2012), an increase of 4% over the prior year. Its applications to registrations ratio is about 9 to 1. • Ryerson's ratio of 1st choice applications to student spaces is 4:1 (2012), and continues to be higher than any other Ontario university. • Ryerson's ranking among Ontario universities in the proportion of students with an entering grade of 80% or higher rose to 6th in 2011 from 14th in 2006. • The mean entering average for Ryerson students was 81.9% in 2011.
Operating Revenue • At $8,542 per eligible BIU student (undergraduate and graduate), Ryerson has one of the lowest operating revenues per eligible BIU student of all Ontario universities.
Graduate Studies • Over 75% of master's enrolment at Ryerson is in professional programs. • Graduate enrolment accounts for 7% of total enrolment at Ryerson, a level that remains well below its international peer universities which are over 20%.
Experiential Learning • Over 90% of undergraduate programs have an experiential learning component. • Over 130,000 student registrations were in experiential learning courses/activities.
Career-Relevant and Labour Market-Ready Programs and Graduates • 95% of Ryerson graduates are employed two years after graduation (Class of 2009). • Labour market outcomes for Ryerson graduates are very strong with 84% of graduates employed in a career related to their field six months after graduation (Class of 2009), which is 17% higher than the Ontario university system average. • Two-thirds of undergraduate enrolment is in accredited programs.
Research • Ryerson's sponsored research income ranks 6th in Ontario and 14th in Canada among non-"medical/doctoral" universities.
Digital Media Zone • Since the Ryerson Digital Media Zone opened in 2010, 51 companies have been incubated and/ or accelerated.
Online Learning • Ryerson is a leader in Ontario in online university education offering 282 degree-credit courses, 186 non-credit courses, 3 degree programs, and 23 certificates fully online, as well as 5 blended degree programs and 20 blended certificates.
Transfer Pathways • Ryerson is one of the most transferred-to universities in Ontario, with over 7,830 students or 28% of its undergraduates having had previous college or university experience.
City Building • Ryerson has completed the Ryerson Image Centre, reinvented Gould Street as a pedestrian plaza, and opened the Mattamy Athletics Centre in the former Maple Leaf Gardens. Construction of a new Student Learning Centre on Yonge Street is underway, and a Health Sciences Building and new student residences are in the planning stages. Ryerson's capital expansion has involved innovative partnerships with government and private sector partners like Loblaw Companies, AMC Theatres, Cadillac Fairview, and MPI Group.

Appendix Figure 1: A Timeline of Ryerson's History of Institutional Transformation, Degrees and Diplomas Awarded Annually, 1950 to 2011



Appendix Table 2: Professional and Career-related Programs: Enrolment in Accredited Undergraduate Programs, 2011-12

Program	Fall Headcount	FFTEs (annualized)
Business Management	6,193	5,480
Business Technology Management	1,706	1,431
Health Services Management	118	47
Hospitality and Tourism Management	710	603
Retail Management	487	437
Interior Design	392	361
Child and Youth Care	578	387
Nutrition and Food	409	369
Midwifery	120	99
Nursing	2,083	1,365
Nurse Practitioner	15	4
Public Health	362	322
Social Work	899	793
Urban and Regional Planning	403	377
Architectural Sci.	477	428
Engineering: Aerospace, Biomedical, Chemical, Civil, Computer, Electrical, Industrial and Mechanical	3,286	2,951
Chemistry	178	154
Computer Science	516	462
Enrolment in accredited undergraduate programs	**18,932**	**16,071**
Ryerson total undergraduate program enrolment	**28,001**	**24,161**
Enrolment in accredited programs as a percentage of total undergraduate enrolment	**68%**	**67%**

Appendix Table 3: Selected Current Productivity Enhancing Initiatives at Ryerson

Academic Support Processes

Lab utilization initiative: Space utilization is being improved by using a financial incentive model to intensify instructional lab utilization, enabling conversion of underutilized space to research and graduate studies laboratories or other high-demand uses.

Teaching assignment initiative: Comprehensive improvements in business processes relating to faculty teaching assignments, instructor course schedules, and faculty workload reports in order to minimize duplication and create optimized schedules and loadings.

Improved financial services for researchers: Initiative to streamline the structure and business processes for managing and reporting the University's research activities, including integration of these functions in the Financial Services department to eliminate duplication of systems.

Completion contingent financial support for doctoral students: To improve time-to-completion, the fourth year of Doctoral student financial support has been made conditional on completion in four years.

Process for online course delivery: Streamlining of processes for development of online course content, which has resulted in doubling of courses that can be created annually for fully online delivery.

Expansion of digital collections in the Library: Provision of digital materials to enhance availability of resources to students and researchers while optimizing space usage.

Enhanced information search tools and 24/7 access to Library e-resources: Software tools and apps that optimize full-text access to digital information resources for students and researchers, improving the quality of the student experience by minimizing time spent locating research information.

Student Service Processes

Document imaging: Digitization of student application and records process to reduce data entry and manual processing. Information will become part of the student record, and can be accessed by the student and appropriate staff throughout the student's enrolment at Ryerson.

Adjudication of graduate scholarships and awards: Improves quality of student experience by streamlining the process for adjudication by having a single, integrated review for graduate scholarships and awards eligibility, including OGS.

Online services for mature students: Process to allow students to register for certificates and course series online, and creation of database queries to determine how far a student has progressed in the completion of a course series. Self-service reduces staff time required for these functions.

Administrative Service Processes

Electronic purchasing tool: Web-based tool that allows suppliers/vendors to submit proposals and quotations electronically, and captures records created by evaluators who review proposals. Creates an integrated, efficient purchasing environment.

iExpense software: Tool that increases efficiency in the processing of staff and faculty reimbursements and results in faster turnaround time.

Integrated employee well-being and accommodation services: Initiatives to engage with employees and facilitate timely and safe return to work, thereby minimizing absences.

eLearning format for employee training: Provision of knowledge and skills development training to more employees while requiring less time away from work duties while at training.

eHR efficiency enhancements: Ongoing improvements to eHR system, including online process for hiring part-time instructors and teaching assistants, and self-service time reporting for all employees to allow increased volume of transactions within reduced timeframes.

Appendix Figure 2: Proposed Entrepreneurial Zone Funding Model

Ryerson proposes that "zone education" become integrated in the Ontario universities operating grants formula (i.e. BIU funding) that will help cover the operating costs incurred in providing entrepreneurial education. These registrants would be seamlessly funded through the growth in accessibility funding already planned by the Government.

The current operating grants formula funds units of activity that lead to a degree credential over a period of time where enrolment in these units of activity (FTEs) are counted each term. This measurement technique has been in place for 45 years. Zones represent a new model of learning that emphasizes the process of developing entrepreneurial innovation that is not captured within a degree credential.

Ryerson is proposing a modernization to the operating grants formula that would expand the eligible units of activity to encompass zone activity. Students admitted to an entrepreneurial zone would be formally registered, counted for BIU purposes and evaluated each term. They would receive formal recognition on their transcript. The table below outlines the key assumptions underlying the proposed new model.

Why is the BIU approach advantageous?	**1. The funding model is familiar to MTCU and to Ryerson.** **2. The proposed new funding model can be integrated seamlessly into MTCU's regular enrollment reporting.** **3. Submissions are auditable by MTCU, ensuring rigorous data collection and accountability for use of Government funds.**
What is the appropriate unit for funding?	**Ryerson recommends that registrants in entrepreneurial zones be counted as part of the regular enrolment reporting file. Zone registrants can be:** - **Full-time degree students** - **Part-time degree students** - **Zone-registered users (not registered in a degree program)**
How will occupied spaces translate into FFTE?	**Zone resource requirements are driven by the presence of registrants in zone spaces. Assuming that a) full-time students will only be present in the zone on a part-time basis, given coursework and other requirements, and b) part-time students will be able to spend more of their time in the zone, Ryerson proposes reporting zone registrants to MTCU as either full or part-time, according to the following principles:** **1. A student registered full-time in their program of study (i.e. $\geq$ 0.4 FFTE) in a given term will be counted in the zone as an additional 0.25 FFTE for that term.** **2. A student registered part-time in their program of study (i.e. < 0.4 FFTE) in a given term will be counted in the zone as an additional 0.5 FFTE for that term.** **3. Zone-registered users will be counted as 0.5 FFTE in the entrepreneurial zones in a given term.**
Minimum institutional investment in zone education?	**Ryerson recommends establishing a minimum threshold of institutional commitment to zone education before enrolment become eligible for funding. This threshold should be 45 enterprises incubated. Once achieved in an auditable manner, registrants in subsequent terms would be eligible for BIU funding.**
What is the appropriate BIU weight?	**Ryerson recommends that entrepreneurial zone education be categorized as Undergraduate: Miscellaneous BIU with FORPOS and a weight of 2.0 specifically set for Ryerson (similar to engineering, upper-year computer science and science) consistent with section 3.2.3 of the Ontario Operating Funds Distribution Manual. This is similar to the treatment of some unique specialized programs at other universities.**

Appendix Table 4: Digital Media Zone (DMZ) Companies*

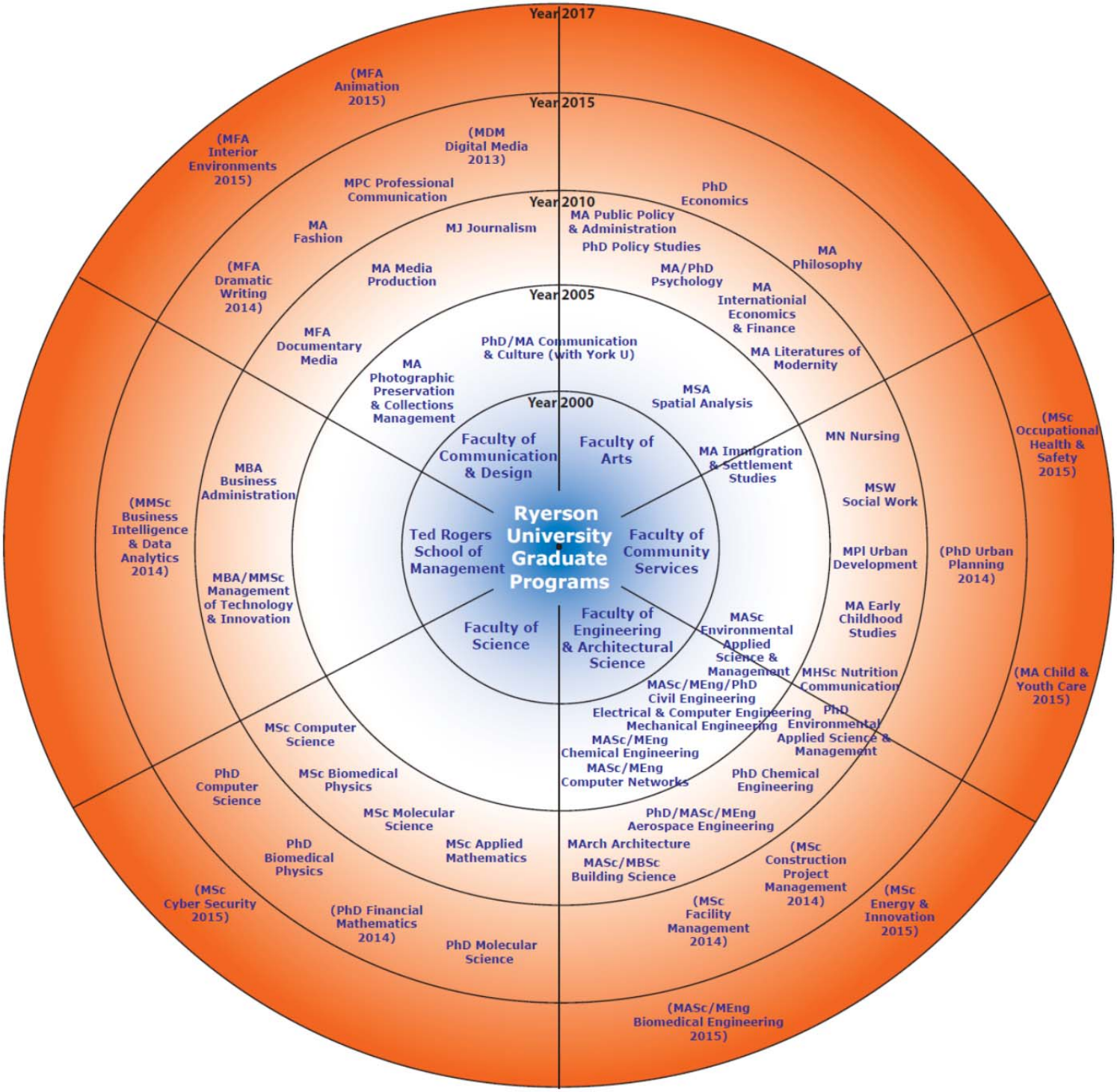
Companies		
121 Live	HugeMonster	Skate To Great
500 px	Jobdeals	SoJo
Aha Moment	Kela Medical	Spenz
ARB Labs	Komodo OpenLab	Stackrocket
Bionik Laboratories	Kytephone	TAD Tactile Audio Displays
Bright Bunny	Lean In	Tapgage
Burstn	Moonrider	Team Save
Commerce Times	National Scholarship	Three Red Cubes
Crowdfield	Peytec	Tiny Hearts
EatSleepRIDE	Phosphorus Media	unBrokr
Electric Courage	Ping Pong Story	Unhaggle
Fanfare	Professor Pass	UnRealty
Finizi	Real Sociable	Viafoura
Flybits	Scanly	Virtual Next
Greengage	Screen Goddess	Visualize Me
HireWinston	Shape Collage	Vital Hub
HitSend	Shop Society	Who Plus You

* List of companies since DMZ launch to September 1, 2012

Appendix Table 5: Graduate Fall FTE Enrolment (Domestic Students)

Program	Actual					Projected
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Master's Programs						
Communication & Culture	69	62	51	39	31	33
Environmental & Applied Science & Mgt	51	54	49	50	54	56
Spatial Analysis	30	26	26	29	22	23
Chemical Eng	28	25	27	18	21	28
Civil Eng	83	92	90	81	78	76
Electrical Eng	111	110	101	103	87	97
Mechanical Eng	92	91	94	94	78	71
Computer Networks	54	70	70	83	71	68
Photographic Preservation	21	29	34	36	32	31
Immigration and Settlement	45	38	36	39	42	39
International Econ & Finance	26	28	30	29	27	27
Public Policy and Admin	47	45	52	47	48	49
Nursing	80	89	83	95	97	114
Business MBA	68	84	87	157	175	151
Master's of Management Science	9	3	4	8	7	8
Early Childhood Studies	44	53	31	27	23	22
Biomedical Physics	17	19	21	23	26	27
Molecular Science	26	27	25	32	28	26
Aerospace Eng	31	46	49	50	33	30
Journalism	26	52	54	49	55	55
Documentary Media	31	55	53	50	51	51
Media Production	25	22	22	23	19	26
Computer Science	21	41	55	59	62	56
Social Work	31	33	30	32	35	36
Architecture	26	44	62	49	54	61
Psychology	23	40	32	31	32	31
Nutrition	15	15	20	20	19	19
Building Science		16	33	36	35	38
Literatures of Modernity		13	20	21	19	22
Urban Development		23	50	57	62	56
Applied Mathematics			10	20	19	20
Professional Communication				23	24	22
Philosophy				13	24	27
Fashion & Design				19	36	31
Total Master's Programs	**1,129**	**1,345**	**1,400**	**1,540**	**1,524**	**1,527**
PhD programs						
Communication & Culture	34	40	44	44	41	28
Civil Eng	19	25	26	23	26	25
Electrical Eng	24	34	46	50	43	46
Mechanical Eng	23	28	38	41	45	46
Chemical Eng	3	7	9	11	13	14
Aerospace Eng	2	15	20	24	21	22
Environmental & Applied Science & Mgt			5	11	14	19
Policy Studies			9	18	28	36
Psychology			23	37	52	65
Economics				5	6	8
Computer Science					6	11
Biomedical Physics					4	8
Molecular Science					4	7
Total PhD programs	**105**	**149**	**220**	**264**	**303**	**335**
Total Master's + PhD programs	**1,234**	**1,494**	**1,620**	**1,804**	**1,827**	**1,862**

Appendix Figure 3: Ryerson Graduate Program Plan by Faculty – Programs In Place in 2012-13 and Planned to 2017-18



(AWAITING APPROVAL FOR IMPLEMENTATION)

Appendix Table 6: Graduate Planned Fall FTE Enrolment (eligible for funding)

Program	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Existing Master's programs	**1,527**	**1,582**	**1,627**	**1,639**	**1,660**	**1,660**
New Master's programs						
Digital Media		35	37	37	37	37
Construction Project Management			20	25	25	25
Facility Management			20	25	25	25
Dramatic Writing			16	30	30	30
Business Intelligence & Data Analytics			20	42	42	42
Occupational Health & Safety				15	30	30
Biomedical Engineering				30	39	39
Child & Youth Care				20	20	20
Animation				20	42	42
Interior Environments				30	33	33
Cyber Security				30	58	58
Energy & Innovation				20	42	42
Master's Professional Diplomas			40	80	100	100
Total New Master's programs		**35**	**153**	**404**	**523**	**523**
Total Master's programs *	**1,527**	**1,617**	**1,780**	**2,043**	**2,183**	**2,183**
Currently funded level	1,433					
Above curently funded level	**94**	**184**	**347**	**610**	**750**	**750**
Existing PhD programs	**335**	**363**	**369**	**376**	**375**	**373**
New PhD programs						
Urban Planning			5	9	12	15
Financial Mathematics			5	9	12	15
Doctoral Diplomas			20	40	40	40
Total New PhD programs			**30**	**58**	**64**	**70**
Total PhD programs **	**335**	**363**	**399**	**434**	**439**	**443**
Currently funded level	183					
Above curently funded level	**152**	**180**	**216**	**251**	**256**	**260**

* Other Master's programs at an earlier stage of development include: Diversity and Locality in Global Contexts, Film Preservation, Financial Analysis, Globalizing Knowledge, Safety Engineering, Urban Food Security

** Other PhD programs at an earlier stage of development include: Biomedical Engineering, Business, Digital Media, Disaster and Emergency Management, Early Childhood Studies, Immigration and Settlement, Nursing, Social Work, Urban Energy

Appendix Table 7: Proposed Graduate Programs

Master's programs:

Animation (MFA): Students will become adept at editing, scriptwriting and computer graphics. Experiential learning, where students create a variety of products including those using interactive design, is a key component of the program.

Biomedical Engineering (MASc/MEng): This program will create synergy between life sciences researchers and engineers, further advancing Ryerson's role in the application of life sciences and engineering knowledge in a variety of medical fields.

Business Intelligence and Data Analytics (MMSc): Graduates will be able to fully leverage vast amounts of data for operational as well as strategic decisions in a number of sectors such as banking, insurance, health care, government, and retail.

Child and Youth Care (MA): Graduates of this program will demonstrate in-depth competencies related to the assessment, prevention and intervention processes pursuant to complex child, youth or family situations in accordance with evidence-based practices.

Construction Project Management (MSc): Graduates will demonstrate a valuable combination of technical proficiency along with business, management and leadership skills.

Cyber Security (MSc): This program will provide graduates with a combination of technical skills and business acumen that is in high demand. The Information and Communications Technology Council highlights that hiring requirements pose a serious challenge given the current shortage of candidates with the skills required for security roles.

Digital Media (MDM): This program will offer professional education across the fields of art and design, technology, and entrepreneurship. Students will make strong links with industry, and will have the opportunity to take their ideas from concept to market.

Dramatic Writing (MFA): This program will develop well-rounded writers who can meet market demand for material across a variety of visual, digital and performative media. No other Canadian university offers an MFA in dramatic writing across the disciplines of Film, Theatre and Television.

Energy and Innovation (MSc): The proposed program will act to support Ontario's interest in alternative energy generation, and is a natural complement to Ryerson's Centre for Urban Energy, which will provide graduate students with the opportunity to develop and commercialize innovative solutions to energy and sustainability.

Facility Management (MSc): Students in the proposed program will benefit from an interdisciplinary curriculum that includes architecture, engineering and business. Graduates will demonstrate a valuable combination of technical proficiency along with business, management and leadership skills.

Interior Environments (MFA): There will be a need for designers who can respond to expectations for interiors that meet certain conditions, such as being environmentally friendly or more accessible. Designs that respond to the requirements of Ontario's AODA are an example.

Occupational Health and Safety (MSc): Graduates of this program will be prepared to serve as industry leaders in maintaining safety and preventing injury due to biological, physical, chemical or other hazards across a wide variety of occupations.

Other Master's programs at an earlier stage of development include: *Diversity and Locality in Global Contexts, Film Preservation, Financial Analysis, Globalizing Knowledge, Safety Engineering, Urban Food Security*

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Appendix Table 7: Proposed Graduate Programs, continued

Doctoral programs:

Financial Mathematics (PhD): This program responds to the increasing demand for advanced mathematical skills in the financial sector, and builds on the strong research record established by faculty and master's students in Ryerson's Financial Mathematics research group.

Urban Planning (PhD): Building on the success of the Master's program in Urban Development this program will contribute practitioners and researchers who can respond to new planning challenges resulting from rapid urbanization, mass migration, economic disparity, environmental degradation and globalization.

Other doctoral programs at an earlier stage of development include: Biomedical Engineering, Business, Digital Media, Disaster and Emergency Management, Early Childhood Studies, Immigration and Settlement, Nursing, Social Work, Urban Energy.

Appendix Table 8: International Peer Universities

	Received University Status (Year)	Total Enrolment (Headcount)	Graduate Enrolment (Headcount)	Graduate Share of Total Enrolment
Australian Peer Universities				**26%**
Curtin University of Technology	1986	45,884	10,528	23%
Queensland University of Technology	1989	41,946	10,528	25%
RMIT University	1992	51,435	12,008	23%
University of South Australia	1991	35,940	8,434	23%
University of Technology Sydney	1988	34,634	12,698	37%
United Kingdom Peer Universities				**21%**
The University of Brighton	1992	21,130	3,770	18%
London Metropolitan University	1992	22,835	6,285	28%
The Manchester Metropolitan University	1992	34,765	7,025	20%
The University of Portsmouth	1992	23,400	4,370	19%
The University of Salford	1992	21,575	4,820	22%
University of the West of England, Bristol	1992	30,530	6,295	21%
Ryerson University 2011-12	**1993**	**35,632**	**2,322**	**7%**

Sources: Australian Technology Network of Universities, Student Enrolment (2010 data)
United Kingdom Higher Education Statistics Agency (2010-11 data)

Appendix Table 9: Sponsored Research Income for Non "Medical/Doctoral" Canadian Universities

Rank	University	Sponsored Research Income 2010-11 ($000)
Ontario Non "Medical/Doctoral" Universities		
1	University Ontario A	$148,905
2	University Ontario B	$144,299
3	University Ontario C	$70,456
4	University Ontario D	$69,379
5	University Ontario E	$28,348
6	**Ryerson University**	**$22,524**
7	University Ontario F	$22,428
8	University Ontario G	$20,661
9	University Ontario H	$17,359
10	University Ontario I	$15,655
11	University Ontario J	$13,641
12	University Ontario K	$9,997
13	University Ontario L	$8,312
Canadian Non "Medical/Doctoral" Universities		
1	University A	$148,905
2	University B	$144,299
3	University C	$98,481
4	University D	$87,374
5	University E	$70,942
6	University F	$70,456
7	University G	$69,379
8	University H	$64,998
9	University I	$53,919
10	University J	$39,126
11	University K	$28,348
12	University L	$23,822
13	University M	$22,848
14	**Ryerson University**	**$22,524**
15	University N	$22,428
16	University O	$20,661
17	University P	$18,296
18	University Q	$17,884
19	University R	$17,377
20	University S	$17,359
21	University T	$17,026
22	University U	$16,087
23	University V	$15,655
24	University W	$15,042
25	University X	$13,641
26	University Y	$11,444
27	University Z	$11,153
28	University AA	$9,997
29	University AB	$9,396
30	University AC	$9,005
31	University AD	$8,393
32	University AE	$8,312
33	University AF	$8,173
34	University AG	$5,335

Source: RE$EARCH Infosource Canada's Top 50 Research Universities 2011 (2010-11 data)

Appendix Table 10: Graduate Programs and Examples of Industry and Community Partners

Aerospace Engineering, MASc, MEng, PhD (required research project or thesis): Pratt and Whitney Canada; Rolls-Royce (Montreal); NRC of Canada - Institute of Aerospace Studies; MDA - Space Missions; Bombardier; Sinclair Interplanetary
Applied Mathematics, MSc (required thesis): Sigma Analysis & Management Ltd. Investment Management.; Winston Inc; Mako Invent; Research partner (MITACS Accelerate); NeoVentures Biotechnology Inc.
Architecture, MArch (required thesis project, intensive research studio, collaborative exercise): Ontario Association of Architects
Biomedical Physics, MSc, PhD (required research project or thesis and collaborative research): Artenga Inc.; Circuit Plus Inc.; F. Hoffmann-La Roche, Ltd.; Hamilton Health Centre; Hospital for Sick Children; Lumasonix; Princess Margaret Hospital; Seno Medical Instruments Inc.; St. Michael's Hospital; Sunnybrook Hospital; Toronto Poly Clinic Inc.; Ultrasonix Inc.
Building Science, MBSc, MASc (required research project or thesis): Trow Engineering; Alphatec; Athena Institute; Bentall LLP; BPC; BRE Canada; City of Toronto; CMHC; Enbridge; Roxul; TRCA
Chemical Engineering, MEng, MASc, PhD (required major research project or thesis): Cloud Dynamics Inc.; Vision Coaters Canada Ltd.; Xerox Research Centre
Communication and Culture, MA, PhD (optional field placement): Achilles; Atmosphere Industries; CAMH; CBC; Centre for European and Int'l Policy (Belgium); Diversity Institute; Evergreen; Firefly Books; Haven Entertainment (Los Angeles, CA); Henning Software Solutions; IDRC; McLuhan Media Museum; Mobile Experience Centre; Privacy commissioner; TAFF; Xenophile
Computer Networks, MASc, MEng (required thesis, projects, seminars, placements): AT&T Global Services Canada; Bell Canada; Cisco Canada
Computer Science, MSc, PhD (community outreach activities): National Institute of Standard and Technology (NIST); Halton Regional Police: UAV Technology Evaluation; Louis Arbour SS; Mayfield SS; WG Davis SPS; Ontario Provincial Police - PERT/UCRT; Toronto Fire Services: Search Technology Development
Documentary Media, MFA (required research project): TIFF: Bell Lightbox - DOC NOW Documentary Media Festival; Toronto Image Works - DOC NOW Documentary Media Festival
Environmental Applied Science & Management, MASc (required research project or thesis): Ateneo de Manila (Manila, Philippines); Fleetec Inc.; Laboratory Services Branch, Ministry of the Environment
Literatures of Modernity, MA (optional practicum): Book Thug; Broken Pencil; Harbourfront Centre; Literary Review of Canada; Modern Literature and Culture Research Centre; Ontario Literacy Coalition; PEN Canada; The Rights Factory; The Walrus; Worldwide Short Film Festival; WRITE Magazine
Master of Business Administration, MBA (optional industry placement, thesis): Best Funds; Invest Toronto; Rogers Communications; Scotiabank; TD Bank
Management of Technology and Innovation, MMSc (optional industry placement, thesis): BMO; P&G; PwC

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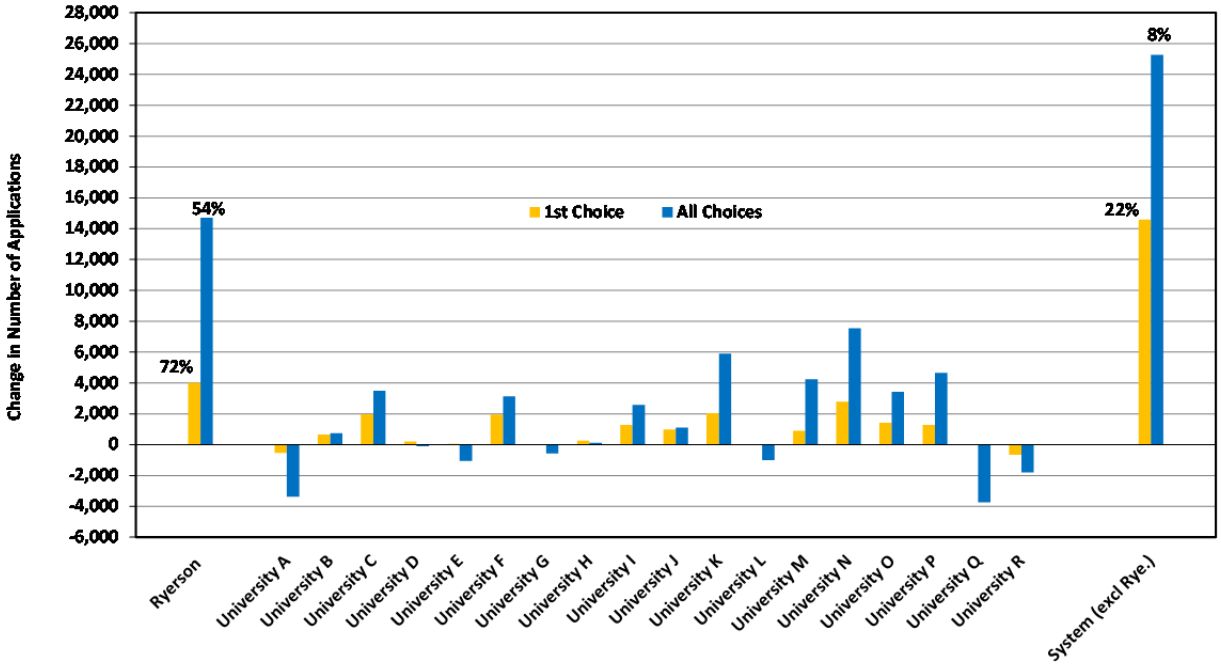
Appendix Table 10: Graduate Programs and Examples of Industry and Community Partners, continued

Mechanical Engineering, MEng, MASc, PhD (required research project or thesis): ArcelorMittal Dofasco; Cameco; Canadian Space Agency; CANMET Materials Technology Laboratory; CleanEnergy Developments (Geothermal Energy); Cyclepods Canada; General Motors Global Research and Development Center; Hydro One; Magna Cosma International; Mako International; National Research Council Canada; Ontario Hospital Association; OPG; Pratt and Whitney Canada; QinetiQ Belgium; TD Bank; Toronto Atmospheric Fund; Toronto Regional Conservation Authority; Total Oil Company; Union Gas Ltd.
Nutrition Communication, MHSc (optional professional practicum): About Kids Health (Sick Kids Hospital); Canadian Sugar Institute; Canadian Diabetes Association; Dairy Farmers of Canada; FoodShare; General Mills; Heart and Stroke Foundation; Loblaw; Nestle; Sunnybrook Hospital; Toronto Public Health; Toronto Western Hospital
Professional Communication, MPC (required major research paper, internship): Deloitte; Radian 6; MaRS; Extendicare Canada; Siren Communications; WestJet; Canada Post; St Michael's Hospital; ACT Toronto; Unionville Art Gallery; Walrus Magazine; Roots; Investor Education Fund
Public Policy and Administration, MA (optional field placement chosen by 95% of students): 33 Signals Regiment - Foundation; Aboriginal Legal Services of Toronto; Canada Africa Partnership on AIDS; Canadian Coalition for Seniors' Mental Health; Citizenship and Immigration Canada; Department of Canadian Heritage; Department of Foreign Affairs and International Trade Canada; Greater Toronto Civic Action Alliance; Infrastructure Ministry; Institute of Public Administration of Canada; Ministry of Community and Social Services; Ministry of Training, Colleges and Universities; Ontario Association of Chiefs of Police; Ontario Ministry of Citizenship and Immigration; Ontario Ministry of Finance; Ontario Ministry of the Environment; Safe Kids Canada; St. Michael's Hospital; Toronto East General Hospital; Tourism and Culture Ministry; Township of King; Transport Canada
Psychology, MA, PhD (required multiple practica): Baycrest Geriatric Health Care Centre; Bob Rumball Centre for the Deaf; Canadian Foundation for AIDS Research; CAMH; Centre for Music Education and Cognition; Chinese Academy of Sciences (Beijing, China); CIHR; Deaf Cultural Centre; Hamilton Health Sciences; Humber River Regional Hospital; Lance Armstrong Foundation; McMaster Children's Hospital; National Institute of Mental Health (U.S.A.); North York General Hospital; Ontario Corrections Institute; Ontario HIV Treatment Network; Ontario Mental Health Foundation; Ontario Ministry of Children and Youth Services; Ontario Ministry of Health and Long-Term Care; St. Michael's Hospital; Sick Children's Hospital (Toronto); St. Joseph's Healthcare (Hamilton); Sunnybrook Health Science Centre; Tactile Audio Display Systems Inc./Ryerson DMZ; Toronto General Hospital; Toronto Rehabilitation Institute; Veterans Affairs Canada; WaveDNA/MITACS
Spatial Analysis, MSA (required field practicum): City of Toronto; Provincial government; Service Employees' International Union; The Stop Community Food Centre; Toronto Community Housing
Urban Development, MPl (required internship): Canadian Urban Institute; City of Brampton (Development Services); City of Burlington (Planning and Building); City of Oakville (Department of Planning Services); City of Toronto (Heritage Preservation, Official Plan Review, Affordable Housing Office, Social Development Division); Councillor Mike Layton's Office (Toronto); Design Dialog; Downtown Yonge Business Improvement Area; Home Ownership Alternatives; IBI Group; Live Work Learn Play; Metrolinx; Ministry of Citizenship and Immigration; Ministry of Municipal Affairs and Housing; Ontario Heritage Trust; Region of Peel (Planning, Policy and Research); The Planning Partnership; Town of Ajax (Planning & Development Services); Town of Markham (Development Services)

Appendix Table 11: Percentage of Undergraduate Programs with External Experiential Learning Component

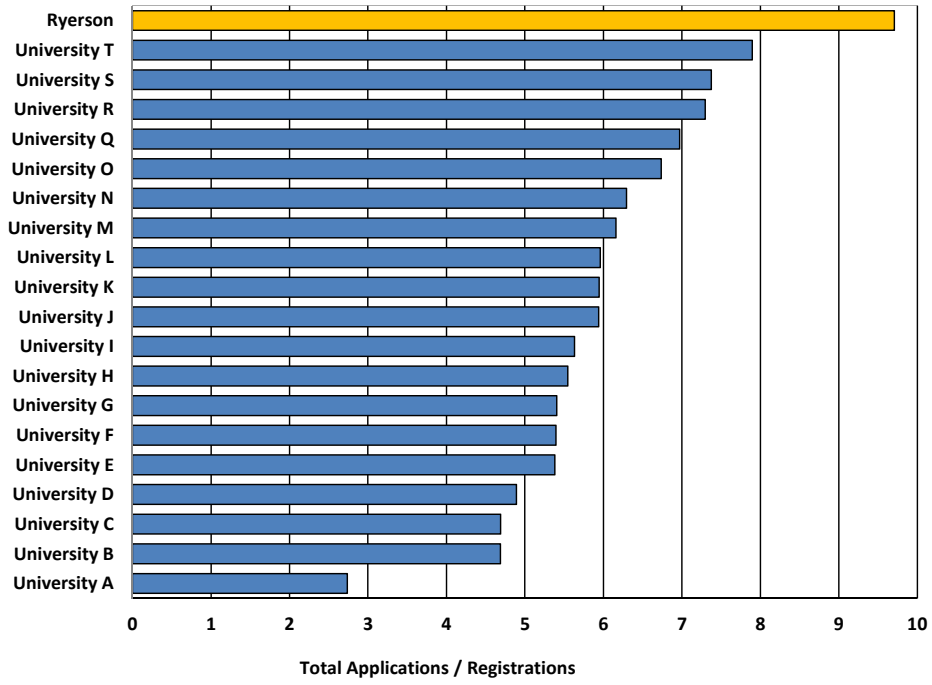
Faculty / Program	Co-op	Internship	Work Placement	Field Experience/ Placement	Clinical Placement	Total
Faculty of Communication & Design	**0%**	**0%**	**11%**	**67%**	**0%**	**78%**
Fashion			✓			✓
Graphic Communications Management				✓		✓
Interior Design				✓		✓
Journalism				✓		✓
Image Arts				✓		✓
Radio & Television Arts				✓		✓
Theatre Acting						
Theatre Dance						
Theatre Performance Production				✓		✓
Faculty of Arts	**0%**	**20%**	**0%**	**80%**	**0%**	**100%**
Arts & Contemporary Studies				✓		✓
Criminal Justice				✓		✓
English				✓		✓
Environment & Urban Sustainability		✓				✓
Geographic Analysis				✓		✓
History				✓		✓
International Economics		✓				✓
Politics & Governance				✓		✓
Psychology				✓		✓
Sociology				✓		✓
Faculty of Community Services	**14%**	**14%**	**0%**	**43%**	**29%**	**100%**
Child & Youth Care		✓				✓
Early Childhood Studies				✓		✓
Food & Nutrition				✓		✓
Nursing					✓	✓
Occupational & Public Health	✓					✓
Social Work					✓	✓
Urban & Regional Planning				✓		✓
Faculty of Engineering & Architectural Science	**22%**	**67%**	**0%**	**0%**	**0%**	**89%**
Aerospace Engineering		✓				✓
Architectural Science						
Biomedical Engineering		✓				✓
Chemical Engineering	✓					✓
Civil Engineering	✓					✓
Computer Engineering		✓				✓
Electrical Engineering		✓				✓
Industrial Engineering		✓				✓
Mechanical Engineering		✓				✓
Faculty of Science	**100%**	**0%**	**0%**	**0%**	**0%**	**100%**
Biology	✓					✓
Chemistry	✓					✓
Computer Science	✓					✓
Mathematics	✓					✓
Medical Physics	✓					✓
Ted Rogers School of Management	**20%**	**40%**	**0%**	**40%**	**0%**	**100%**
Accounting & Finance				✓		✓
Business Management FT				✓		✓
Business Technology Management	✓					✓
Hospitality & Tourism Management		✓				✓
Retail Management		✓				✓
Ryerson	**20%**	**24%**	**2%**	**42%**	**4%**	**93%**

Appendix Figure 4: Change in Ontario Universities' Undergraduate Secondary School Applications, First Choice and All Choices (2012 vs. 2004)



Source: OUAC

Appendix Figure 5: Applications to Registrations Ratio for Ontario Universities (Fall 2011)



Source: OUAC, 2011

Appendix Table 12: Percentage of Ontario Universities' Year 1 Students from Secondary School with an Entering Average of 80% or more

Fall 2006			Fall 2011		
Rank	**University**	**Percentage of Students with Entering Avg of 80%+**	**Rank**	**University**	**Percentage of Students with Entering Avg of 80%+**
1	University A	96.5%	1	University B	98.7%
2	University B	86.3%	2	University A	97.4%
3	University C	83.2%	3	University C	94.0%
4	University D	76.8%	4	University D	88.6%
5	University E	72.5%	5	University E	82.5%
6	University F	62.9%	**6**	**Ryerson**	**71.1%**
7	University G	60.9%	7	University K	68.9%
8	University H	57.7%	8	University G	68.7%
9	University I	52.7%	9	University F	65.0%
10	University J	52.5%	10	University L	60.8%
11	University K	52.0%	11	University I	59.2%
12	University L	50.9%	12	University H	57.6%
13	University M	48.8%	13	University J	57.4%
14	**Ryerson**	**47.6%**	14	University O	56.4%
15	University O	47.2%	15	University P	53.4%
16	University P	45.9%	16	University M	52.1%
17	University Q	42.0%	17	University Q	50.6%
18	University R	39.4%	18	University R	47.5%
19	University S	30.7%	19	University T	41.4%
			20	University S	38.4%

Appendix Table 13: Undergraduate FFTE Enrolment (Domestic Students)

Program	Actual	Projected					
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Existing programs *	**25,627**	**26,395**	**26,494**	**26,591**	**26,668**	**26,738**	**26,738**
New programs							
Biomedical Science			93	181	259	330	350
Creative Industries			91	175	249	325	350
Entrepreneurial zones			500	750	1,025	1,025	1,025
Financial Mathematics			28	55	80	102	110
Philosophy			27	52	75	97	110
Professional Communication			54	97	138	178	184
Real Estate Management			93	178	256	332	360
Subtotal new programs			**886**	**1,487**	**2,081**	**2,388**	**2,489**
Total	**25,627**	**26,395**	**27,380**	**28,077**	**28,749**	**29,126**	**29,227**
Growth over 2011-12		**768**	**1,753**	**2,450**	**3,122**	**3,500**	**3,600**

* exclude college students in the nursing collaborative program

Appendix Table 14: Undergraduate Programs Planned for Fall 2013 Implementation

Biomedical Sciences (B.Sc.): This biological science program focuses on the mechanisms of disease and health, including cutting-edge topics such as Systems Biology and Stem Cell Biology, and practical skills development such as experimental design. The program is well situated, as the Toronto Region is home to 30% of the Canadian life science workforce.

Creative Industries (B.A.): This interdisciplinary program is the first of its kind in Canada. It provides a grounding in the management, marketing and legal aspects of operating in the creative industries (e.g., film, fashion, theatre, interior design). Graduates will have the capacity to transform creative ideas into commercial products and services.

Financial Mathematics (B.Sc.): In an industry climate of competition and innovation, this science program offers students a grounding in analytical techniques that are of immediate use in the financial sector, preparing graduates to undertake roles in areas such as computational finance, investment banking, trading systems, risk analysis and risk management.

Philosophy (B.A.): This distinctive program is part of Ryerson's unique, career-relevant Arts platform. Students will apply a variety of conceptual frameworks to community issues. The program includes an innovative experiential learning component where students engage with groups in the community such as seniors, youth in shelters, and high school students who are at risk of discontinuing their studies.

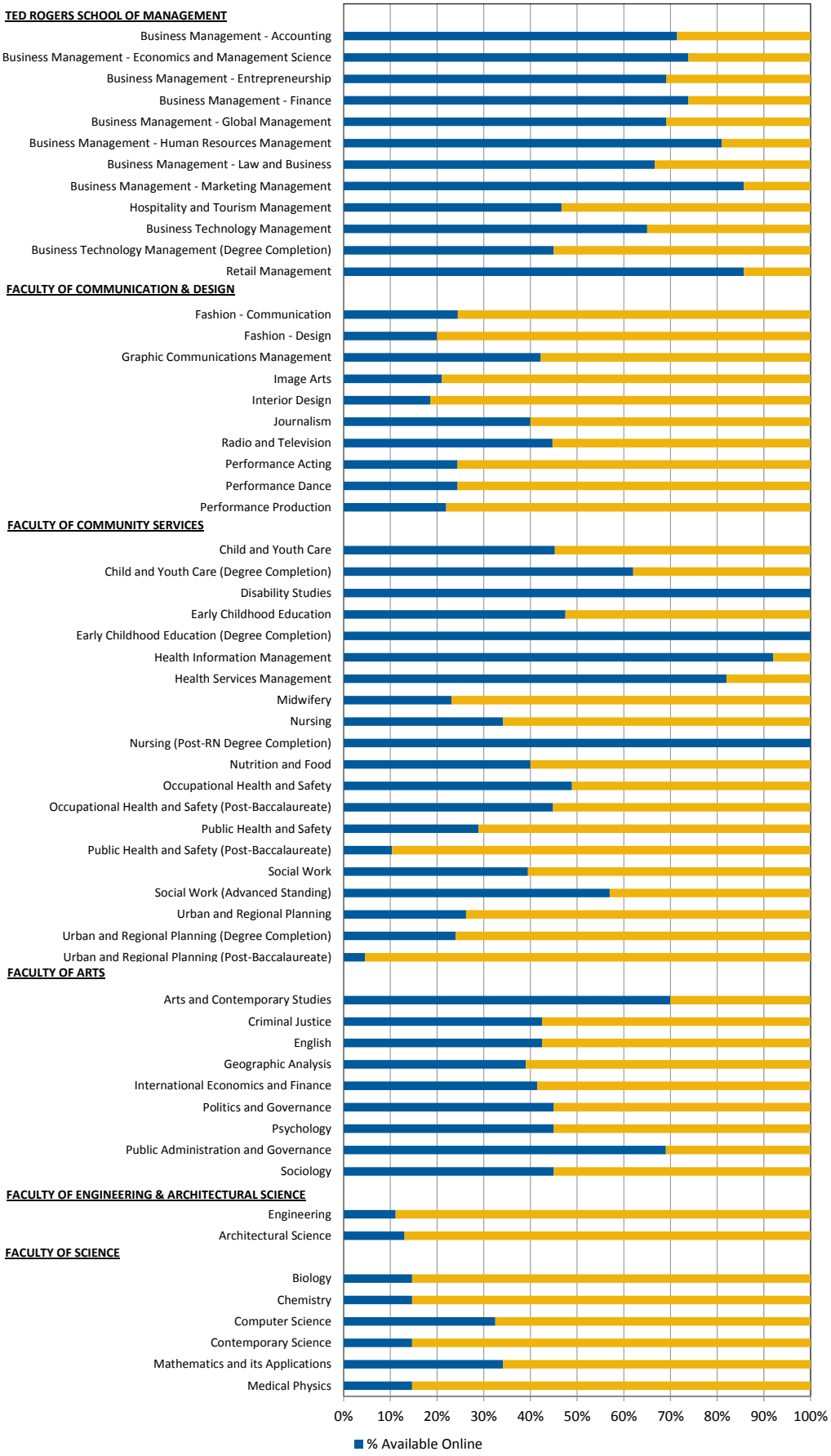
Professional Communication (B.A.): This program has a practice-based orientation with a number of innovative, professionally-relevant topics such as digital communication and social media, law, and risk and crisis communication, preparing graduates to develop and implement communication strategies for different audiences and in varying contexts.

Real Estate Management (B.Comm.): Industry support for the Real Estate Management program has been very strong. The program forges a direct link to one of the Greater Toronto Area's most significant employment sectors and will prepare students for management and analytical roles focused on resolving issues and challenges arising in both the commercial and residential real estate industries.

Other programs at an earlier stage of development include: *Food Practice and Innovation, Game Development and Design, Languages and Intercultural Communication, Sport Media, and Visual Studies and Design.*

Appendix Table 15: Percentage of Ryerson Undergraduate Students Who Have Previously Attended Another Postsecondary Institution, Fall 2011

Faculty	Fall 2011	From CAAT		From University		Total	
	Headcount	#	%	#	%	#	%
Faculty of Arts	3,265	162	5%	427	13%	589	18%
Faculty of Communication & Design	3,901	103	3%	546	14%	649	17%
Faculty of Community Services	6,335	1,625	26%	1,388	22%	3,013	48%
Faculty of Engineering & Architectural Science	4,047	127	3%	475	12%	602	15%
Faculty of Science	1,357	40	3%	210	15%	250	18%
Ted Rogers School of Management	9,096	1,289	14%	1,438	16%	2,727	30%
Ryerson	**28,001**	**3,346**	**12%**	**4,484**	**16%**	**7,830**	**28%**

Source:
Ryerson Student Information System, Fall 2011

Appendix Figure 6: Percentage of Programs Available Via Online Courses