

**Academic Standards, Curriculum and Pedagogy Committee
Report to Senate at its meeting of February 26, 2015**

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York University

**New Program Brief of the Graduate Program in
Mechanical Engineering**

Submitted: December 22, 2014

1. Introduction

1.1 Provide a brief statement of the degree program(s) being proposed, including commentary on the appropriateness and consistency of the degree designation(s) and program name with current usage in the discipline or area of study.

This is a proposal for two different degrees, both housed within the Department of Mechanical Engineering: the Masters of Applied Science (M.A.Sc.) in Mechanical Engineering and Doctorate (Ph.D.) in Mechanical Engineering. Mechanical Engineering is the ideal name for the program as it is a well-recognized and known/understood program designation for what is planned for delivery in this proposal. Also, our survey of similar graduate programs showed that the degree designations as stated above are common to many similar programs in Ontario and Canada. The proposed first intake for both of these degree programs is September 2015.

Graduate study in Mechanical Engineering is considered as a cornerstone for any Engineering Faculty that is delivering an undergraduate Mechanical Engineering program. The research enabled by the graduate program will allow faculty members to remain up to date in the latest technological and scientific advances within the field of Mechanical Engineering, and contribute to the wider society by a higher level of scholarly activities and technology development. In addition, the enrolled graduate students will be an important partner in delivering the undergraduate program in Mechanical Engineering as they will be teaching assistants for laboratory demonstrations and tutorials. Furthermore, graduates of such a graduate program are needed to support today's technologically driven society and economy in Ontario and Canada so their employment prospects will be strong upon graduation. The American Society of Mechanical Engineer's Vision 2030 report¹ clearly indicated that employers value and require ever more employees with a graduate degree.

This proposal is also very timely considering the Reaching Higher and Putting Students First² plans through which the government of Ontario has expressed its commitment to the expansion of graduate student spaces by 6,000 through 2016. Furthermore, this proposal is in line with current expansion of engineering programs at York and the recent founding of the Lassonde School of Engineering as well as establishment of the Department of Mechanical Engineering and its first undergraduate intake in Fall 2014.

As normally practiced, the focus of the Mechanical Engineering graduate program will be broadly based to reflect the expertise of the current and the future faculty members, which will include areas such as kinematics, thermodynamics, solid mechanics, manufacturing, microsystems, control, advanced materials, heat transfer, design, fluid mechanics, energy and environment, and their applications to a wide array of systems and subsystems found in various machineries and devices or living organisms along with strong emphasis on technology commercialization to match with the recent trends in translational research conducted by the faculty members. The outcome of the research work done through the graduate program can be important in wide industrial sectors such as medical devices, automotive, aerospace, electronics packaging, manufacturing, shipping, transportation, energy production and usage, mechanics of human body and living organisms, mechatronics, nanotechnology, robotics, microsystems, sustainable building systems, control and industrial simulators, rehabilitation technology, etc. Graduates from a Mechanical Engineering program can expect to find employment in any of the above areas as well as related R&D, certification, inspection, maintenance, implementation and life-cycle management functions. Also they will be excellent champions in creating new ventures by translating their own research into commercialization.

Research intensification is a priority of the York University as stated in the University Academic Plan (UAP) 2010, and establishment of this proposed graduate program can form an important piece in such an endeavor especially in the context of the newly formed Lassonde School of Engineering. Also, in tune with the Lassonde School of Engineering philosophy, the graduate program in the Mechanical Engineering will promote a broader student learning and scholarly achievements by providing opportunities for enhancing graduate students' communication skills, awareness of intellectual property and entrepreneurship issues, professional ethics and

¹ "Vision 2030: Creating the future of Mechanical Engineering Education", ASME Annual Conference, Pittsburgh, USA, June 7, 2010.

² "Enrollment Increases", OCUFA Briefing Note, July 2011.

sustainability concepts so that they can deliver to the spirit of Renaissance Engineers™ that can make an impact for the communities within York University and beyond.

1.2 For graduate programs that wish to have a Quality Council endorsed field(s), please indicate the field(s) for each of the master's and PhD programs.

No fields are proposed for the program.

1.3 Provide a brief description of the method used of the development and preparation of the New Program Brief, including faculty and student input and involvement.

The document has been developed through an extensive consultation process among current faculty members in the Mechanical Engineering Department and also with respective individuals in Osgoode Law School, Schulich Business School, and the Teaching Commons. These consultation processes involved one-to-one meetings and departmental meetings.

1.4 Indicate the Faculty/unit in which the program will be housed (for undergraduate programs™) or anchored (for graduate programs).

It will be housed in the Mechanical Engineering Department at the Lassonde School of Engineering.

The inception of Lassonde School of Engineering took place on November 2011, when Pierre Lassonde announced his founding \$25 million donation to create a home for Renaissance Engineering™. In July 2012, the Lassonde School of Engineering was formally launched with Dr. Janusz Kozinski as Founding Dean. In May 2013, students (graduates and undergraduates) and faculty members in the Department of Electrical Engineering & Computer Science and the Department of Earth & Space Science & Engineering (both previously part of the Faculty of Science and Engineering) joined the Lassonde School of Engineering. A new \$90M home of the Lassonde School of Engineering is under construction, to be occupied by September 2015, possible through donations from philanthropists Ignat Kaneff and Douglas Bergeron. Now the Lassonde School of Engineering has undergraduate programs in Mechanical Engineering and Civil Engineering. A new Chemical Engineering Department is planned to be opened in 2017.

2. General Objectives of the Program

2.1 Provide a brief description of the general objectives of the program.

The graduate program in Mechanical Engineering is focused on excellence in learning and professional development for students. This program aims not only to advance students' knowledge and expertise beyond Bachelor's level in the field of Mechanical Engineering, but also to enable and foster their independent research skills, creative activities and entrepreneurship skills. In addition to the focus placed on original research, students will be provided with opportunities for professional development through engaging in complementary education and training in areas such as law, business, ethics, technical writing, and communication. As such, the objectives of the graduate program are designed so that by the time of graduation, the M.A.Sc. students will obtain and demonstrate the skills and abilities below:

- (i) Acquisition of advanced knowledge through classroom learning in conventional and specialized subjects of Mechanical Engineering and related fields
- (ii) Ability for graduates to independently conduct research and creative activities with guidance, resulting in contributions to the body of knowledge of their chosen fields
- (iii) Diversification of knowledge and experience beyond the immediate research field by engaging in complementary education and training in areas such as teaching/mentoring and commercialization as well as public outreach activities
- (iv) Effective delivery and communication of scholarly findings with professionals and society at large in various forms, such as oral presentations (e.g. conferences and industrial forums) and disseminations (e.g. scholarly journals, patents and mass media outlets)
- (v) Commitment to implementation of professional and ethical standards as well as sustainable practices related to research and professional activities

Similarly, the Ph.D. students will obtain and demonstrate the following skills and abilities:

- (i) Acquisition of advanced knowledge through classroom learning in conventional and specialized subjects of Mechanical Engineering and related fields
- (ii) Ability for doctoral (Ph.D.) graduates to conduct research independently through defining, planning and solving of scientific problems to lead and advance knowledge in their field of specialization. Research outcomes should lead to creativity and competence at an international level
- (iii) Diversification of knowledge and experience beyond the immediate research field by engaging in complementary education and training in areas such as teaching/mentoring and commercialization as well as public outreach activities
- (iv) Effective delivery and communication of scholarly findings with professionals and society at large in various forms, such as oral presentations (e.g. conferences and industrial forums) and disseminations (e.g. scholarly journals, patents and mass media outlets)
- (v) Commitment to implementation of professional and ethical standards as well as sustainable practices related to research and professional activities

2.2 Describe how the general objectives of the program align with University and Faculty missions and academic plans.

Since York University's establishment in 1959, engineering programs were envisioned. More than a decade ago, the vision of engineering programs was initiated at York University with the School of Engineering established within the then Faculty of Science and Engineering in 2001 along with the Canadian Engineering Accreditation Board (CEAB) accreditation of its 3 engineering programs in the last decade. The recent establishment of the new Lassonde School of Engineering, since May 1, 2013, represents the second expansion plan for engineering at the university. Consistent with engineering planning document, the establishment of the graduate program in Mechanical Engineering will represent an important component for the engineering expansion at York University.

The 2010-2015 University Academic Plan (UAP) explicitly commits to the diversification of academic activities in line with creating a more comprehensive university, including teaching and research in the area of engineering. It also states that in order to achieve this objective, establishment of new programs in engineering is needed. Furthermore, the 2013-2018 York University Strategic Research Plan (YUSR) also emphasizes

the significance of engineering research. One of the primary goals highlighted in YUSRIP is research intensification. In particular, the university will establish new and expanded research programs, which push exploration of smart technologies for a green environment and healthier lives, and enhance public safety and security, to complement the existing research foci in space and climate sciences, computation and connective media technologies. YUSRIP also envisions that “the expansion of engineering and applied science research will see York University reaches the first tier for innovation in these areas within five years.” This proposed program forms one component of the second wave of expansion in engineering program offerings to include the major engineering disciplines, including Mechanical Engineering.

Mechanical Engineering is a diverse discipline that applies knowledge of design, manufacturing, as well as engineering and material sciences to advance the well-being of humankind. It derives its breadth in mechanical systems, sustainability, energy, health and biomedical devices, infrastructure, etc. In light of this, this proposed graduate program will allow York University to achieve its academic and strategic research plans for the expansion of engineering, and creating a more comprehensive University. It aims to satisfy the mission of York University to achieve excellence in research and teaching in applied and professional fields, as well as to prepare graduate students in their future careers through engaging them in complementary education and training in areas beyond their research. These will be done through (i) delivery of advanced knowledge through classroom learning experiences, (ii) training of Master’s and Doctoral students’ independent research skills to conduct research and creative activities, and (iii) development of graduate students’ skills in complementary areas.

By training graduate students and support research activities in cutting-edge pioneering research in emerging fields, such as micro-systems, advanced manufacturing and materials, bio-systems, and energy systems, etc., the program will fulfill the stated commitments “to paving the way to an expanded Engineering program” as stipulated in 2010-2015 UAP. The program’s objectives to train students to conduct creative and competent research at an international level and to possess professional and ethical standards as well as sustainable practices align with YUSRIP’s vision of “facilitating the scientific and technological breakthroughs for the 21st century to meet the challenges of environmental sustainability, the prevention and treatment of disease, and the development of new materials and devices to make Canadian products competitive in the global marketplace”. With the first stream of Mechanical Engineering undergraduate program that started in Fall 2014, the development of the graduate program will also fulfill the needs for graduate students to support the undergraduate program through teaching assistantships. Therefore, the delivery of the proposed Mechanical Engineering graduate program is essential for the Department of Mechanical Engineering, the Lassonde School of Engineering, and York University.

In summary, the general objectives of the program are consistent with the Lassonde School of Engineering’s commitment to expose students to a rich research culture and provide opportunities for them to participate in research as part of their studies. It will also aspire to train graduate students to gain experiences and to recognize important areas beyond the core of their research disciplines. Examples of key complementary areas include: (i) engineering pedagogy; (ii) technology transfer, commercialization, and related matters; (iii) legal aspects; (iv) communications; and (v) ethical, societal, and safety obligations, etc. These will provide additional assets for graduate students to succeed in their future career paths, either in academia or industry. Through this entrepreneurship bend in the program, it is expected that the graduate students will themselves create new enterprises and they will be “job creators” rather than “job seekers”, which will eventually help the Province economy and will make Canada globally competitive.

3. Need and Demand

3.1 Identify similar programs offered at York and/or by other Ontario universities, with special attention paid to any innovative and distinguishing aspects of the proposed program.

There is no graduate program offered at York University that is similar to the one proposed here. There are a number of Mechanical Engineering graduate programs that are offered at many Ontario universities (i.e., Carleton University, University of Guelph, Lakehead University, McMaster University, University of Ottawa, Queen's University, Royal Military College of Canada, Ryerson University, University of Toronto, University of Ontario Institute of Technology, University of Waterloo, Western University, and University of Windsor). Nationally there are more Mechanical Engineering graduate programs. This is so, as this graduate program trains graduate students in frontier research areas and/or advanced engineering knowledge needed by Canadian industries and enterprises; graduates of Mechanical Engineering graduate programs are very much in demand in academic, private, government, and not-for-profit sectors.

The current Mechanical Engineering graduate programs offered at Ontario universities fall into two types of programming: The first type offers students opportunities to pursue research-based graduate work at Master's and Doctoral levels. Master's degree distinctions include M.Sc., M.A.Sc., and M.E.Sc.. The second type is a course-based program, either on a full-time or part-time basis, with typical degree distinction as M.Eng. It offers advanced mechanical engineering courses to train students as professional mechanical engineers. The proposed graduate program planned at York University focuses on the first type of the graduate programs, as will be discussed below. However, for context, an analysis of the current offering of Mechanical Engineering programs in either of the above two categories is presented for Ontario universities.

Research-Based Graduate Program: The research-based graduate program (Master's and Ph.D.) is intended for students that are interested in pursuing advanced studies and research at postgraduate level. It typically takes 24 months and 48 months for Master's students and Ph.D. students, respectively, to complete. Master's students must complete four to five one-term graduate courses or equivalent, and successfully defend a thesis at a Master's oral exam. Ph.D. students must complete three to five one-term graduate courses or equivalent. It also usually requires annual committee meetings to assess the student's progress. These can include: (i) qualifying exam within 12 months of registration to the program, and (ii) annual progress review meetings in subsequent years. Similar to Master's students, Ph.D. students will also need to successfully defend a thesis at a Ph.D. oral exam. This type of program aims to train each graduate student in a particularly chosen major research area under the supervision of a professor with the related areas of expertise. It strives to develop graduate students' professional and research independence, creativity, leadership, and the capacity for continuing professional and intellectual growth.

The research-based graduate program has two versions: The first version is a fully traditional program in which graduate students will focus on a research area within the discipline of Mechanical Engineering. Such a program is offered at all Ontario universities that were examined. The second version is one that students are participating in an interdisciplinary research program that is jointly offered by multiple departments or institutions. It provides students with an educational environment that spans among different disciplines. Examples of collaborative graduate programs include: Biomedical Engineering (i.e., Department of Mechanical and Industrial Engineering and Institute of Biomaterials and Biomedical Engineering at the University of Toronto), Engineering-International Development Studies (e.g., School of Engineering and International Development Studies at the University of Guelph), Environmental Engineering (i.e., Department of Chemical Engineering and Applied Chemistry, Department of Civil Engineering, Department of Materials Science and Engineering, and Department of Mechanical and Industrial Engineering at the University of Toronto), Health Care, Technology, and Place (i.e., involves 10 departments at the University of Toronto), Nanotechnology (i.e., involves 7 departments at the University of Waterloo), Mechanical and Aerospace Engineering (i.e., Ottawa-Carleton Institute for Mechanical and Aerospace Engineering), and Resuscitation Science (i.e., involves 14 departments at the University of Toronto), etc.

Graduate students enrolled in the research-based graduate program will receive a variety of financial supports in the form of research assistantship, teaching assistantship, and/or scholarships, etc. However, the course-based graduate program usually expects the candidate to be financially self-supporting. Therefore, sometimes

it has limitation for graduate students who are committed to build a research career, be it in academics or in research intensive federal, provincial and corporate laboratories.

The proposed graduate program will be a research-based graduate program. The mission of the proposed Mechanical Engineering graduate program at York University is to train graduate students and support research activities in advanced areas of core disciplines (e.g., thermofluids, solid mechanics and materials, statics, kinematics and dynamics, manufacturing, as well as control/measurements) and cutting-edge pioneering research in emerging and interdisciplinary areas (e.g., micro-systems, advanced manufacturing and materials, bio-systems, and energy systems, etc.). Various studies as mentioned in the sections 1.1 and 2.2 of this proposal have shown that both students and receptor community (e.g., future employers in industry) will benefit tremendously by having students developed an array of soft skills (e.g., teamwork, written and oral competency, independence, entrepreneurship and leadership), familiarity with business of engineering, basic understanding of legal, ethical, and intellectual property matters in engineering, as well as societal and environmental aspects of engineering, and its globalization through the research conducted by the current faculty members in the department. As such we have designed the curriculum, which is described in the later sections, and assemble our faculty to accomplish this mission systemically.

Innovative and Distinguishing Aspects: The proposed graduate program in the Department of Mechanical Engineering at York University has two unique aspects, which will prepare graduate students in their respective research areas and beyond. These aspects include: (1) helping graduate students to develop independent research skills to conduct advanced research and creative activities at international level; and (2) exposing graduate students to important complementary areas (e.g., engineering pedagogy, technology transfer and commercialization, legal aspects, communications, intellectual property, as well as professional, ethical, and environmental obligations, etc.) beyond their research. Together, they will provide graduate students opportunities to not only bridge fundamental sciences to technology development in the context of their thesis research, but also gain a breadth of skills, values, and experiences in ethics, sustainability, entrepreneurship, commercialization and communications, etc.. These complementary areas, beyond those obtained from their research activities, are needed in their future career paths. The program also aligns with the vision set out for the Lassonde School of Engineering to create Renaissance Engineers™ – entrepreneurial engineers with a social conscience and a sense of global citizenship. Currently, the research-based graduate program available in different post-secondary institutes in Canada only focus on the foundation knowledge of the mechanical engineering discipline, with seldom emphasis on “soft skills” and “entrepreneurship” within the academic curriculum. The proposed research-based graduate program in Mechanical Engineering provides comprehensive training opportunities for the graduate students in foundation knowledge of the discipline (through compulsory core mechanical engineering courses) and the understanding of the bigger role engineers play in the society (through compulsory complementary courses in law, business, and engineering education).

Course-Based Graduate Program: For the second type of Mechanical Engineering graduate program at Ontario universities, i.e. course-based Master of Engineering program (M.Eng.), it is designed for students who wish to pursue their Mechanical Engineering education beyond the undergraduate level but do not wish to pursue a thesis-based research program. The Lassonde School of Engineering is planning to offer a course-based M.Eng. program, which will be coming forward under a separate proposal.

3.2 Provide brief description of the need and demand for the proposed program, focusing as appropriate on student interest, social need, potential employment opportunities for graduates, and/or needs expressed by professional associations, government agencies or policy bodies.

As articulated in the report *State of the Nation 2012*³, “business innovation [in a country] is an engine of productivity growth, increased international competitiveness and higher living standards. It is underpinned by investments in R&D, machinery and equipment (especially information and communications technologies (ICT)) and intangible assets”. However, based on most of the measures provided, Canada has lagged behind many competitor countries in business innovation and continues to rank at the middle (to bottom) among countries of the Organisation for Economic Co-operation and Development (OECD). Particularly, business enterprise expenditures on research and development (BERD, i.e. the R&D conducted by firms in Canada) as a percentage of Gross Domestic Product (GDP) has been on an almost continuous decline for the past

³ Science, Technology and Innovation Advisory Council report to the government of Canada

decade, and has raised a lot of concerns for Canada's economy. Higher education expenditures on R&D (HERD) as a percentage of GDP in Canada has fluctuated over the last decade but increased slightly since 1990's. Canada continues to perform poorly in effective transfer of generated knowledge from higher education institutions to the companies that are able to translate it into useful products. In order to break into the ranks of the world's top-five performing countries, five important Science, Technology and Innovation (STI) indicators have been identified by the STI advisory council to the government, that Canada should focus on:

- a) BERD as a share of GDP
- b) Business investment in ICT
- c) HERD as a share of GDP
- d) Science and engineering doctoral degrees granted per 100,000 population
- e) Share of human resources in science and technology

As predicted above, Canada's future as an innovation-based global economy depends on training educated talents with R&D expertise, interdisciplinary skills, entrepreneurial characteristics and understanding of professional and societal needs at a global level. Students graduated at Masters and doctoral levels gain extensive experience in research and hence, are frontiers of conducting R&D at higher education institutions (i.e. HERD) and supply the workforce needed for R&D activities inside the business sector (i.e. BERD). Although Canada and more particularly Ontario continue to be among the world leaders in undergraduate-level education, when it comes to training of graduate students, the province lags behind other jurisdictions and the competing countries. Ontario needs to close the gaps in conducting more R&D, training more graduate students and providing them with opportunities to follow their careers in the province and at the same time providing opportunities for them to create new ventures.

Governments of Canada and Ontario have already taken action towards the support for R&D to boost innovation, technological advancement and prosperity for tech-driven industries. R&D-driven economy in Ontario is reflected in the spending dollar amounts and government regulations and decisions in this domain. According to Statistics Canada⁴, the dollar amount of R&D performed by business and higher education institutions (dominant sectors) has risen significantly since 1990; from \$5 billion in 1990 to \$15.6 billion in 2012 for the business and from \$3 billion in 1990 to \$11.5 billion in 2012 for the higher education sectors. According to *Research and Development in Ontario 2011 report*⁵, more than \$13.9 billion Canadian Dollar in BERD and HERD is spent every year in Ontario. Large enterprises such as Atomic Energy of Canada, Bombardier, Ford Canada, Magna, GlaxoSmithKline, Research In Motion and Xerox Canada are conducting cutting-edge R&D in Ontario. Ontario is attractive to these and many other small and medium enterprises (SMEs) due to its exceptional research talent (>100,000 researchers), R&D cost competitiveness (generous R&D tax incentive programs) and government support for innovation.

As discussed before, to support Ontario's (and Canada's) mission of prosperous economy, it is highly important to train graduate-level students with R&D talents who can directly contribute to advancement of innovation in key economic growth sectors in Ontario. Ministry of Research and Innovation stated in the *Ontario's innovation Agenda* report that bio-economy and clean technologies, advanced health technologies and pharmaceutical research and manufacturing are among the highlighted areas of strong economic growth where Ontario already holds a position of global importance and/or can quickly mobilize existing resources and skills to do so. In connection to this, aerospace, automotive, clean energy, clean technology, materials and medical technologies are among the key economic sectors in Ontario as identified by Ontario Investment and Trade Centre where Mechanical Engineers can contribute significantly.

Mechanical engineers play an important role in fulfilment of R&D needs in the above-mentioned key economic areas. Ontario's aerospace industry generates approximately \$6.5B in sales annually. Ontario is home to five of the world's top automakers, as well as 350+ innovative part manufacturers who are making the lighter, stronger and safer cars of the future. Cars that are made of totally recyclable materials and run on green, renewable clean energies. In 2009, a priority was placed by Green Energy and Green Economy Act (GEA) establishing Ontario as the North American leader in producing and using clean and renewable sources of energy including wind, water, solar, biomass and biogas power. Since then, the number of wind turbines has been increased from 10 in 2003 to more than one thousand in Ontario. We produced more energy from wind and solar than from coal in 2011. Ontario is also a global leader in the field of clean water technologies and water protection. For instance, two of the world's leading water and wastewater treatment technologies (UV purification and membrane filtration) were developed in Ontario. Ontario is the largest hub of biomedical

⁴ Statistics Canada, CANSIM Table 358-0001, December 2012.

⁵ By Ontario Investment and Trade Center

activity in Canada and the fourth largest biomedical research centre in North America. Professional post-graduate-level Mechanical Engineers can play significant roles in R&D conductance, innovation and advancement of the technologies discussed above in Ontario. In this regards, development of graduate Mechanical Engineering programs with focused research areas on core (e.g. thermodynamics, fluid mechanics, materials, and solid mechanics) and interdisciplinary (e.g. sustainable energy systems, dynamics and control of electro-mechanical systems, advanced manufacturing and materials, micro-systems and bio-systems) fields of Mechanical Engineering is of great importance. This has been taken into consideration in designing the proposed Mechanical Engineering program at York University.

The need for training more graduate students (including Mechanical Engineers) with research experience who can conduct R&D activities in the abovementioned key business sectors in Canada/Ontario has increased during the past few years. Ontario universities train more than 52,000 graduate students with a 45% increase in provincially-funded students that has happened over the past decade (Ontario Ministry of Training, Colleges and Universities (MTCU). MTCU has also announced its intention to create 6,000 new graduate spaces until 2015-16 to address the needs for graduate studies. These post-graduate trainees are highly needed in a variety of business sectors such as the ones discussed above. According to a survey of firms conducted by EKOS Research Associates Inc. in 2011 and published in the report *Innovation Canada: A Call To Action*, firms that performed in-house R&D had hired 59% graduate-degree employees to conduct their activities. Although this clearly demonstrates the need for talents with higher education in Canada, only 18% of the responding firms had Ph.D. holders performing R&D projects. In 2010, Canada was ranked 15th among 20 countries in training doctoral-level graduates in the Science and Engineering disciplines (Organization for Economic Co-operation and Development). It is articulated in the report *State of the Nation 2012*⁶ that “given the importance of doctoral talent to the creation and application of new knowledge, this is another indicator where Canada should focus concerted attention on enhancing its performance [to be competitive among OECD countries]”. The question is in what programs these post-graduate trainees are more dominantly sought? According to MTCU, Engineering and Applied Science as well as Health Professions have been among the highest demanded and fastest growing graduate programs in the past decade. The new 6,000 graduate spaces envisioned until 2015-16 by MTCU will be concentrated in these high-demand programs. Additionally, as speculated by the report *Prism Economics and Analysis, The Engineering Labour Market in Canada: Projections to 2020*⁷, engineering industry trends until 2020 are going to be dominated by strength in mining, oil and gas as well as manufacturing in Ontario with growth factors exceeding 25%. However, “output and employment losses in manufacturing across the last decade often exceeded 30% so that projected recovery of 25% or more is not enough to restore activity to previous peak levels”. In particular, Mechanical Engineers were reported among the top 3 national engineering labour forces with the highest levels of loss projected until 2020. This clearly shows the importance of the number of Mechanical Engineers that have to be trained and replaced when these losses happen. It is worth mentioning that the total number of engineers needed from 2011 to 2020 in Ontario is predicted to be twice as much as any other province in Canada. The permanent losses to the engineering labour force occur as the older engineers stop working, so in addition to the need for hiring newly-graduated Mechanical Engineers at the undergraduate level, the losses at higher professional ranks have to be replaced by either more experienced engineers or labour forces with post-graduate levels of training and education. Post-graduate Mechanical Engineers may also advance to administrative or managerial positions, become self-employed consultants, start new engineering enterprise, conduct research or may teach at the post-secondary levels.

Post-graduate education in Mechanical Engineering in Canada is also demanded by prospective students at both national and international levels. Engineers Canada stated that in 2011, 13,814 M.Sc., M.A.Sc., and M.E.Sc. as well as 8,173 Ph.D. students enrolled in graduate programs in various engineering disciplines across Canada with a 4.3% growth when compared to enrollments in 2010. At Master’s level, Mechanical Engineering was ranked 3rd with approximately 2,000 enrolments (~15% of total). At the Ph.D. level, Mechanical Engineering programs across Canada attracted the second largest pool of graduate students with approximately 1,300 enrolments (~16% of total). It is worth mentioning that over 37% of these graduate students chose Ontario as their higher education destination in 2011. This clearly demonstrates the enthusiasm and demand of students and the importance of post-graduate education in Mechanical Engineering at Ontario-based universities.

As discussed earlier in this section, post-graduate mechanical engineers may choose to work in a variety of industries, including natural resources (forestry, agriculture, oil and gas, mining), energy (thermal and

⁶ State of the Nation 2012 – Canada’s Science, Technology and Innovation System: Aspiring to Global Leadership, Science Technology and Innovation Council, 2013.

⁷ Engineers Canada

hydroelectric power stations, solar, wind and biofuels), processing (petrochemical refining, food and beverage production), manufacturing (automotive, aerospace, robotics, biomedical technologies, appliances, furnishings and telecommunication equipment), construction (mechanical systems such as elevators or air conditioning, heating and ventilation systems), transportation (road, rail, air, marine, space vehicles and systems) and utility systems (water, natural gas and electricity). According to Engineers Canada and statistics shown in Fig 3.1, the index of employment for Mechanical Engineers in Ontario will continue a steady growth until 2018. The 2009 recession less severely influenced the professional, scientific and managerial Mechanical Engineers' employment and a more steady growth is predicted in the next 5 years for this group. This directly benefits the post-graduate Mechanical Engineering students who are best suited for taking professional, scientific and managerial roles in their careers. In addition, the training received through the proposed graduate program in Mechanical Engineering will help the graduates to seamlessly work with researchers in social and natural sciences and will play a pivotal role in filling the much needed gap in understanding technology uptake issues in communities, both local and global.

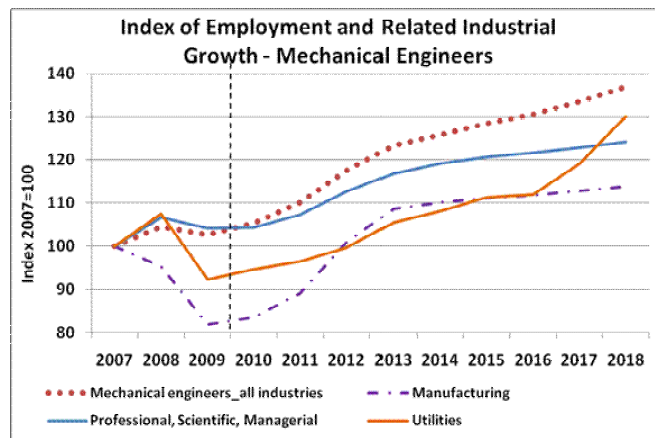


Figure 3.1 – Employment growth projected by Engineers Canada in Ontario for Mechanical Engineers ⁸(the graph is taken from EC website).

Women are typically underrepresented in graduate programs in mechanical engineering despite their increasing overall presence in undergraduate STEM disciplines. The research-based program, proposed here, provides opportunities for graduate students to work at the interface of science and engineering, making it a welcoming academic program that will benefit and attract students representative of a wide range of backgrounds and interests. Furthermore, the different compulsory and complementary courses offered within the program reflect a wide array of disciplinary knowledge including, for example, the art of writing, legal aspects, and teaching and pedagogy. The aim is to provide all students with attractive offerings for developing skill sets that move beyond what has historically been the "nuts and bolts" of mechanical engineering. In addition, the program will work in collaboration with the School of Gender, Sexuality, and Women's Studies in the Faculty of Liberal Arts and Professional Studies to integrate course offerings designed to foster a critical and interdisciplinary understanding of gender and equity in the study and practice of engineering.

⁸ <http://www.engineerscanada.ca/accreditation>

4. Program Content and Curriculum

4.1 Describe the program requirements, including the ways in which the curriculum addresses the current state of the discipline or area of study. Identify any unique curriculum or program innovations or creative components.

The current state of Mechanical Engineering graduate programs and the discipline in general were discussed in Section 3.1. In brief, Mechanical Engineering programs at the Masters level offer students opportunities to either pursue a course-based degree or to engage in research in addition to completing courses. Students enrolled in doctoral programs in Mechanical Engineering follow the second model and are heavily involved in a type of research that advances knowledge. The proposed Mechanical Engineering graduate program at York University also pursues the research-oriented model for both the Masters and doctoral-level students. Graduate students will be involved in research- and course-based activities as separately discussed in sections 4.1.1 and 4.1.2 for Master’s and doctoral students, respectively.

By using a combination of course- and research-based activities, this program aims to advance graduate students’ conceptual understanding of fundamental aspects of the Mechanical Engineering discipline, to enhance their analytical, interpretative, methodological and expository skills and to enable and foster their independent research abilities and creative activities in core and interdisciplinary areas of Mechanical Engineering. The core areas are considered as (a) Thermo-fluids (like fluid dynamics, heat transfer); (b) Mechanics (like continuum mechanics, statics, kinematics and dynamics); (c) Design and Control/Measurement; and (d) Manufacturing (like advanced manufacturing, nanomaterials). The interdisciplinary areas are sustainable energy systems, dynamics and control of electro-mechanical systems, advanced manufacturing and materials, micro-systems and bio-systems. From the program offering point of view, the core and interdisciplinary areas are clubbed as “Core Mechanical Engineering Courses”. Therefore, the rubric for the core courses will be MECH6XYY, where X will signify the core area (X=1 for thermos-fluids, X=2 for mechanics, X= 3 for design; X = 4 for manufacturing, and X = 5 for interdisciplinary topics) and YY will be course number. In addition to the focus placed on original research, graduate students will be provided with unique opportunities for professional development through engaging in complementary education and training in areas outside their fields of research as discussed in sections 4.1.1 to 4.1.3 and 4.2.

Each graduate student at the Department of Mechanical Engineering at York University should identify an academic supervisor(s) (a faculty member from the Department of Mechanical Engineering) from the starting date of his/her enrolment in the program. All students are required to plan and conduct their course - and research-related activities under the direct guidance of their supervisors as discussed in the following sections.

4.1.1. Master of Applied Science (M. A. Sc.) Degree Requirements

Students enrolled at this level will pursue a Master of Applied Science (M.A.Sc.) degree in the Department of Mechanical Engineering at York University. Students are expected to complete the M.A.Sc. in Mechanical Engineering in two years. All requirements for a Master’s degree must be fulfilled within 12 terms (4 years) of registration as a full-time or part-time Master’s student, in accordance with Faculty of Graduate Studies Registration Policies, including the requirement of continuous registration.

Students are required to complete a minimum of four graduate credit courses (12 credits). Out of these, at least two courses need to be from the core Mechanical Engineering department course offerings (see Section 4.2) and one can be a Directed Study (MECH 8000) or credit course from outside the Mechanical Engineering Department (from other departments in the Lassonde School of Engineering (LSE), outside LSE at York University (YU)). These courses should be selected in consultation with and upon approval of the student’s supervisor and the Graduate Program Director (GPD). There will be one complementary education and training course to be chosen out of the current courses available (see Section 4.1.3), typically to be taken after completion of the first year of the program. In addition, every registered graduate student needs to complete two non-credit courses, viz., Engineering Ethics and Graduate Seminar series (see Appendices A and B). To accommodate quick adoption of new graduate core courses from new hires in mechanical engineering, a place holder, MECH 7000, will be used to float “Special Topics in Mechanical Engineering”. The course requirements for M.A.Sc. students are summarized in the table below:

Courses	Requirements
Core Mechanical Engineering Courses – MECH 6101, MECH 6102, MECH 6103, MECH 6201, MECH 6202, MECH 6301, MECH 6401, MECH 6402, MECH 6501, MECH 7000	At least 2 courses
Directed Studies (MECH 8000) or Courses outside Mechanical Engineering Department	No more than one course
Complementary Education and Training Course – ENG 6001, ENG 6002, ENTR 6xxx, EDUC 5414	At least 1 course
Engineering Ethics – ENG 6000	Compulsory non-credit course
Graduate Seminar Series – MECH 6000	Compulsory non-credit course

Master’s students are required to get involved in research activities immediately upon registration in the Mechanical Engineering program and under the general direction of their supervisors. They need to be registered for non-credit Master’s Thesis course (see Section 4.2). They are required to submit a Progress Report (see Appendix D) to their supervisory committee in compliance with the general requirements of the Faculty of Graduate Studies. The Progress Report will document courses taken, teaching assistant duties, knowledge dissemination through publications and presentation, and supervisory committee’s direct feedback on the overall performance of the graduate student. If the performance of the student in research is deemed unsatisfactory by the supervisory committee, he/she may be asked to withdraw from the program immediately. If recommended to continue, students are obliged to conduct and conclude their research and to submit a written thesis to their supervisory committee at the end of their degree period. The thesis should clearly demonstrate the candidate’s ability to conduct independent research and creative activities with guidance, resulting in contributions to the body of knowledge in the area of investigation. The research undertaken and the thesis should be defended by the student in an oral examination session, according to the Faculty of Graduate Studies Standards and Procedures, details of which are provided in Appendix C. The examination committee members will be selected and the defense session will be conducted based on regulations set by the Faculty of Graduate Studies at York University.

4.1.2. Doctoral Degree Requirements

The Mechanical Engineering graduate program’s degree completion requirements will be as per the current FGS regulations and requirements. A supervisory committee, recommended by the appropriate graduate program director and approved by the Dean, Faculty of Graduate Studies, must be formed no later than the end of the fourth term of study. Students will not be able to register in the fifth term of study unless a supervisory committee has been approved. This committee will consist of student’s supervisor and at least two other faculty members from the Faculty of Graduate Studies at York University, one of whom has to be from the Department of Mechanical Engineering.

Students, who already have M.A.Sc., or equivalent Masters’ degrees, are required to complete a minimum 4 graduate credit courses. Out of these, at least 2 courses need to be from the core Mechanical Engineering department course offerings (see Section 4.2) and one can be a Directed Study (MECH 8000) or credit course from outside Mechanical Engineering Department (from other departments in Lassonde School of Engineering (LSE), outside LSE at York University (YU)). These courses should be selected in consultation with and upon approval of the student’s supervisor and the GPD. There will be one complementary education and training course to be chosen out of the current courses available (see Section 4.1.3), typically to be taken after completion of the first year of the program. To accommodate quick adoption of new graduate core courses from new hires in mechanical engineering, a place holder, MECH 7000, will be used to float “Special Topics in Mechanical Engineering”. The course requirements for Ph.D. students are summarized in the table below:

Courses	Requirements
Core Mechanical Engineering Courses – MECH 6101, MECH 6102, MECH 6103, MECH 6201, MECH 6202, MECH 6301, MECH 6401, MECH 6402, MECH 6501,	At least 2 courses (Note: At least 4 courses if students do not have Master’s degree in Mechanical Engineering)

MECH 7000	
Directed Studies (MECH 8000) or Courses outside Mechanical Engineering Department	No more than one course
Complementary Education and Training Course – ENG 6001, ENG 6002, ENTR 6xxx, EDUC 5414	At least 1 course
Engineering Ethics – ENG 6000	Compulsory non-credit course
Graduate Seminar Series – MECH 6000	Compulsory non-credit course

For students who are admitted directly into the Ph.D. program in Mechanical Engineering after completion of their undergraduate degree, would require to take a minimum of 6 courses, out of which 4 courses need to be from the core Mechanical Engineering department course offering (see Section 4.2), one can be a Directed Study or course from outside Mechanical Engineering Department (from other departments in Lassonde School of Engineering (LSE), outside LSE at York University (YU)) and one course has to be the one of the compulsory complementary education and training courses (see Section 4.1.3), typically to be taken after completion of the first year of the program.

Every registered PhD graduate student needs to complete 2 non-credit courses, viz., Engineering Ethics and Graduate Seminar series (see Appendices A and B). For students who have already received their M.A.Sc. from the mechanical engineering department, would not require to take ENG 6000. Other course requirements remain the same. In addition, within 12 months of the program, each Ph.D. student would require to pass the Ph.D. comprehensive examination (see Appendix C). Students who are unable to meet the academic and research requirements for Ph.D. degree, will have the option to be transferred to M.A.Sc. or M.Eng. degrees with appropriate course credits, as recommended by a committee comprised of the Chair of Mechanical Engineering, Graduate Program Director, and Associate Dean Research & Graduate Studies, LSE or his/her representative.

PhD students will also commence their research activities upon registration in the program and plan them in consultation with their supervisor at the start of their studies. They need to be registered for the non-credit Ph.D. Thesis course (see Section 4.2). Ph.D. students are required to conduct research independently through defining, planning and solving of scientific problems to lead and advance knowledge in their field of specialization. Research outcomes should lead to creativity and competence at an international level and have the significance and standard level that can be disseminated in the form of scientific publications. Ph.D. student's research progress is examined annually by meeting with the supervisory committee in which the student is required to submit Progress Report (see Appendix D). The Progress Report will document courses taken, teaching assistant duties, knowledge dissemination through publications and presentation, and supervisor's direct feedback on the overall performance of the graduate student. If the annual performance of the student in research is deemed unsatisfactory by the supervisory committee, he/she may be asked to withdraw from the program immediately, even after successful completion of the Ph.D. comprehensive examination. If recommended to continue, students are obliged to conduct and conclude their research and to submit a written thesis to their supervisory committee at the end of their degree period. The thesis should clearly demonstrate candidate's ability to conduct independent research and creative activities with guidance, resulting in contributions to the body of knowledge in the area of investigation. The research undertaken and the thesis should be defended by the student in an oral examination session, details of which are provided in Appendix C. The examination committee members will be selected and the defense session will be conducted based on regulations set by the Faculty of Graduate Studies at York University.

4.1.3. Complementary Education and Training

The proposed graduate program at the Department of Mechanical Engineering at York University is unique because it will engage graduate students in important complementary education and training in areas such as teaching/mentoring, engineering pedagogy, technology transfer, entrepreneurship and commercialization, legal aspects and governance, communications, as well as ethical, societal and safety obligations. This is possible due to the strong interactions with the Schulich School of Business and the Osgoode Law School at York University, which also translated during the graduate program development exercise. This will result in diversification of knowledge and experience beyond the immediate research field as well as acquisition of qualities and transferable skills required for employment and professional development by the students.

Additionally, students' appreciation of and commitment to implementation of professional and ethical standards as well as sustainable practices related to research and professional activities will be fostered in the proposed graduate program. The critical component towards the design of our proposed graduate program is that we are ensuring every graduate student have necessary complementary skill sets by making graduate students to take one of the complementary education and training courses (for course listing see Section 4.2), based on their interest in engineering education, business, legal aspects, etc., as a compulsory requirement towards completion of their degree requirements.

4.2 Provide a list of courses that will be offered in support of the program. The list of courses must indicate the unit responsible for offering the course (including cross-lists and integrations, as appropriate), the course number, the credit value, the short course description, and whether or not it is an existing or new course. For existing courses, the frequency of offering should be noted. For new courses, full course proposals are required and should be included in the proposal as an appendix. (The list of courses may be organized to reflect the manner in which the courses count towards the program requirements, as appropriate; e.g. required versus optional; required from a list of specified courses; specific to certain concentrations, streams or fields within the program, etc.)

All courses starting with MECH will be offered by the Department of Mechanical Engineering. These are termed as core courses and compulsory graduate courses (see Section 4.1.2 and 4.1.2). The courses with other designations for the first four letters, the prefix describes the unit responsible as per standard. Out of these courses, we have also identified the courses that are classified as complementary education and training courses (see Section 4.1.3). For description of all courses, the credit values as well as prerequisite and co-requisites, see Appendix A.

Core Mechanical Engineering Graduate Courses (for credit):

Course No.	Course Title
MECH 6101	Microfluidics and Nanofluidics
MECH 6102	Interfacial Phenomena
MECH 6103	Convective Heat Transfer
MECH 6201	Advanced Continuum Mechanics
MECH 6202	Advanced Dynamics
MECH 6301	The Finite Element Method in Engineering Analysis
MECH 6401	Design and Fabrication of Polymer Composites and Nanocomposites
MECH 6402	Smart and Multifunctional Materials
MECH 6501	Advanced Engineering Mathematics
MECH 7000	Special Topics in Mechanical Engineering

Compulsory Graduate Courses (not for credit):

Course No.	Course Title
ENG 6000	Engineering Ethics
MECH 6000	Graduate Seminar Series
MECH 9001	M.A.Sc. Thesis
MECH 9002	Ph.D. Thesis

Complementary Education and Training Courses (for credit):

Course No.	Course Title
ENG 6001	Legal Aspects and Governance in Engineering
ENG 6002	The Arts and Sciences of Scholarly Writing
ENTR 6xxx	Entrepreneurship and Technology Ventures
EDUC 5414	Teaching and Learning in post-secondary education

4.3 For undergraduate programs, comment on the anticipated class sizes. For graduate programs, comment on how the course offerings will ensure that each graduate student in the program will take a minimum of two-thirds of the course requirements from among graduate level courses.

The proposed graduate program, as described in Sections 4.1.1, 4.1.2 and 4.1.3, only allows graduate level courses or integrated courses (if available; maximum one integrated course) to be taken as part of their degree requirements. However, if recommended by the supervisory committee, a graduate student may need to take undergraduate courses, which will not be credited towards the graduate degree requirements for M.A.Sc. and Ph.D. degrees in Mechanical Engineering.

4.4 As an appendix, provide a copy of the program requirements as they will appear in the Undergraduate Calendar or Graduate Calendar, as appropriate.

The program requirements are provided in Appendix F. See Appendices A, B, C, and D for all the required courses and other activities that students must complete to graduate.

5. Program Structure, Learning Outcomes & Assessment

The intent of this section is to provide reviewers with an understanding of the knowledge, methodologies, and skills students will have acquired by the time they complete the program (i.e. the program learning outcomes), including the appropriateness of the program learning outcomes and how they will be supported and demonstrated. With that in mind, and with explicit reference to the relevant degree level expectations, it would be useful to focus on what students in the program will know and/or be able to do by the end of a defined period of time and how that knowledge, methodology and/or skill will be supported and demonstrated.

5.1 Provide a detailed description of the program learning outcomes and indicate how the program learning outcomes are appropriate and align with the relevant degree level expectations.

Ontario Universities Council on Quality Assurance provides approval for the existing and new graduate programs in Ontario based on the use of Graduate Degree Level Expectations (GDLEs) that are developed by the Ontario Council on Graduate Studies (OCGS). Accordingly, graduates with M.A.Sc. and PhD degrees are expected to demonstrate the general DLEs listed below but at appropriate competency levels.

- 1- Depth and Breadth of Knowledge
- 2- Research and Scholarship
- 3- Level of Application of Knowledge
- 4- Professional Capacity / Autonomy
- 5- Level of Communication Skills
- 6- Awareness of Limits of Knowledge

The proposed graduate program in Mechanical Engineering at York University encompasses a wide variety of theoretical, applied and complementary studies and activities with program-level learning outcomes that are designed for training of students with the abovementioned GDLEs. These learning outcomes (Tables 5.1.1 for M.A.Sc. and 5.1.2 for PhD graduates) have been developed by the existing faculty members of the department who are experts in various core and interdisciplinary areas of Mechanical Engineering. Graduated students from this program will acquire theoretical knowledge in fundamental (e.g. solid and fluid mechanics, dynamics and control, mechanical design and thermofluids) and applied (e.g. microsystems, advanced materials and biomechanics, energy) areas of Mechanical Engineering, learn how to conduct independent and creative research and to disseminate/communicate scientific results in their specialized fields, diversify their expertise and experiences beyond their immediate research fields by being introduced to complementary studies in business, law and education, and commit to implementation of professional and ethical standards in their future

endeavors. In Tables 5.1.1 and 5.1.2, it is clearly shown how the design of the program, which is based on the guidelines provided by the Ontario Council of Academic Vice-Presidents, captures the University Graduate Degree Level Expectations for M.A.Sc. and PhD students.

Table 5.1.1 Mechanical Engineering M.A.Sc. Graduate Program Learning Outcomes

Degree Level Expectation	Program Learning Outcome <i>By the end of this program, the graduated M.A.Sc. students will be able to:</i>	Program Activities that Fulfill Learning Outcome
1- Depth and Breadth of Knowledge	<ul style="list-style-type: none"> - Critically assess a complex problem with opposing and conflicting positions - Systematically review, analyze, assimilate and interpret a body of scientific literature and innovations in discipline area - Ability to apply mathematics, science and engineering principles 	MECH 6101 to 6501 MECH 6000 MECH 9001
2- Research and Scholarship	<ul style="list-style-type: none"> - Evaluate techniques of research and inquiry - Apply appropriate techniques of research and inquiry to create and interpret knowledge in the discipline - Critique current research and scholarship in the area of professional competence - Analyze complex issues and judgments in the field using established principles and techniques - Design a method of inquiry to explore a research question in the field 	MECH 6000 MECH 9001
3- Level of Application of Knowledge	<ul style="list-style-type: none"> - Critically assess complex problems from the stakeholders viewpoint - Extrapolate limitations of experimental method and propose revised methodology for future research - Apply and validate innovations and discoveries in the lab or real world settings in more efficient and effective ways - Ability to identify, formulate and solve engineering problems 	MECH 6000 MECH 9001
4- Professional Capacity / Autonomy	<ul style="list-style-type: none"> - Create design solutions that take ethical, social, environmental, legal and regulatory influences into account - Predict potential economic, societal, environmental, health, and/or safety risks and benefits of performing a particular engineering task and propose alternative designs to mitigate risks - Integrate professional, social, and environmental considerations into decision analyses - Design research projects that take ethical, social, environmental, legal and regulatory influences into account - Comply with relevant laws, regulations, intellectual property guidelines and contractual obligations and follow best practices in conceptualizing research design projects - Develop concise and coherent reports/academic papers and design documents that reflect critical analysis and synthesis of research 	MECH 9001 ENG 6000 ENG 6001 ENG 6002 ENTR 6xxx EDUC 5414
5- Level of Communication Skills	<ul style="list-style-type: none"> - Construct a credible argument and design appropriate formats to convey position - Critically evaluate reports, design documents and academic papers and present findings to justify one's position - Present material in a coherent and organized form, using an appropriate combination of media, to a variety of audiences 	MECH 9001 ENG 6002 MECH 6000 MECH 6101 to 6501
6- Awareness of Limits of Knowledge	<ul style="list-style-type: none"> - Justify the strength and limitations of identified research solutions and propose questions and methods for future research 	MECH 9001

Table 5.1.2 Mechanical Engineering PhD Graduate Program Learning Outcomes

Degree Level Expectation	Program Learning Outcome <i>By the end of this program, the graduated PhD student will be able to:</i>	Program Activities to Fulfill Learning Outcome
1- Depth and Breadth of Knowledge	<ul style="list-style-type: none"> - Critically assess a complex problem with opposing and conflicting positions - Systematically review, analyze, assimilate and interpret a body of scientific literature and innovations in a number of fields outside ones area of research but pertinent to the research being undertaken - Identify gaps in the literature and opportunities for new research to address shortcomings in the field - Ability to apply mathematics, science and engineering principles 	MECH 6101 to 6501 MECH 6000 MECH 9002
2- Research and Scholarship	<ul style="list-style-type: none"> - Identify novel and significant open research questions - Design research projects to investigate a research question which addresses a gap in the field/discipline - Define and defend a research method and analyses that will achieve the research goals - Revise research design and methodology to account for limitations of the original design - Speculate how the proposed research will address a gap in the field - Speculate how applications of findings would impact the broader body of knowledge and disciplines - Strategize how to address unforeseen outcomes of research by developing a new method of research in the field - Formulate possible modes of solving a research question and decide upon appropriate method by comparing and contrasting complex issues in a specialized field - Critically analyze ideas and data presented at conferences by others and participate in a peer review process 	MECH 6000 MECH 9002
3- Level of Application of Knowledge	<ul style="list-style-type: none"> - implement research experimentation independently without supervision - Conduct independent research appreciating limitations of one's knowledge and seeking support and advice when warranted - Identify and design new tools to assist with experimentation - Ability to identify, formulate and solve engineering problems 	MECH 9002
4- Professional Capacity / Autonomy	<ul style="list-style-type: none"> - Accept responsibility for one's research - Evaluate multidimensional appropriateness of possible courses of action in research experimentation and make autonomous decisions in ways to move forward - Evaluate individual progress towards meeting program requirements and timelines - Before engaging in academic debate evaluate literature to remain up-to-date on findings in the field - Evaluate how ethical, social, environmental, legal and regulatory influences may affect the discipline of one's research differently than other fields of research - Evaluate how non-compliance with relevant laws, regulations, intellectual property guidelines and contractual obligations may create risks in managing one's research - Analyze the critical debates within ones field and more broadly within related fields and predict/identify possible implications of one's research outcomes 	MECH 9002 ENG 6000 ENG 6001 ENG 6002 ENTR 6xxx EDUC 5414
5- Level of Communication Skills	<ul style="list-style-type: none"> - Present material in a coherent and organized form in a public setting, using an appropriate combination of media, to a variety of audiences - Listen carefully and gather feedback and opinions - Debate one's research position in an open forum - Present research findings or proposal of design at an academic conference 	MECH 9002 ENG 6002 MECH 6000 MECH 6101 to 6501
6- Awareness of Limits of Knowledge	<ul style="list-style-type: none"> - Explain how research findings affect multidisciplinary lines between various research fields and disciplines - Identify how assumptions of one's research may be understood differently within different disciplines 	MECH 9002

5.2 Address how the program curriculum and structure supports achievement of the program learning outcomes. For research-focused graduate programs, comment on the nature and suitability of the major research requirement(s) for degree completion.

The program curriculum, as discussed in section 4, is designed to advance students’ knowledge and professional skills in fundamental and applied areas of Mechanical Engineering beyond undergraduate level, and also to provide them with opportunities for professional development through engaging in complementary education and training in areas such as law, business, ethics, technical writing, and communication. The program is research-focused but also takes advantage of course-based activities to reinforce research and professional development. The curriculum, as outlined below and shown in Table 5.2.1, directs each and every student to get engaged in cutting-edge research projects led by the Mechanical Engineering faculty members from the commencement of their graduate studies at York University. This is done by assigning every graduate student to one or more Mechanical Engineering faculty member(s) as supervisor(s) from the beginning of their studies and having them conducting an independent research project immediately after joining the program. These faculty members who have extensive expertise in their research areas supervise the graduate students throughout their studies and form supervisory committees that will monitor student performance as they progress through the program.

Performance assessment is achieved through a number of different approaches, such as annual meetings, submission of Student Activity Reports, oral presentations, comprehensive examinations (Ph.D. students only) and many opportunities for face-to-face communications to ensure that all master and doctoral students receive appropriate training to achieve desired learning outcomes. To reinforce research, students’ level of knowledge in topics related to their fields of scientific investigation and beyond will be strengthened by a combination of coursework requirements in the program.

From a minimum total of four required credit courses, M.A.Sc. and PhD students must select two core ME courses to broaden their knowledge in a wider area of fundamental and applied ME. They must also take one Directed Study or credit course from outside ME department that can be highly tailored towards their research needs, and another one from a set of complementary courses (section 4.1.3) to provide them with unique professional development training and skills in areas such as business, law and education. Beyond the abovementioned activities, all graduate students (master and doctoral) will also participate in two non-credit courses, i.e. engineering ethics and graduate seminars, and are expected to disseminate scholarly research results by preparation of scientific articles and attendance at prestigious scientific conferences and workshops at an internationally-recognized level.

In Table 5.2.1, we provide concrete examples of how the program curriculum and structure supports attainment of the program learning outcomes and hence the GDLEs:

Table 5.2.1 Program components aligned with GDLEs

Degree Level Expectation	Program components supporting achievement of the learning outcomes and the DLES	
	M.A.Sc.	Ph.D.
1- Depth and Breadth of Knowledge	<ul style="list-style-type: none"> - Taking 2 core courses in Mechanical Engineering that widens knowledge beyond immediate field of study - Taking one Directed Studies or credit course from outside ME department that is tailored to immediate research requirements - Taking one complementary credited course to broaden knowledge and improve professional skills - Taking part in Graduate Seminars to get acquainted with other students’ and faculty members’ research programs 	
	Acquiring in-depth knowledge in particular research areas through conducting, writing and defending Master’s theses	Acquiring and generating in-depth knowledge in particular research areas through conducting, writing and defending PhD dissertations
2- Research and Scholarship	<ul style="list-style-type: none"> - Appropriate choice of novel research topics in consultation with supervisors - Dissemination of research results by scholarly publications and presentations at conferences and workshops - Graduate Seminar series that provides opportunities for the students to evaluate current research and perform literature review pertaining to their research topic. 	

Degree Level Expectation	Program components supporting achievement of the learning outcomes and the DLES	
	M.A.Sc.	Ph.D.
	- Core courses in Mechanical Engineering provide state-of-art knowledge in the given area.	
	Successful completion of M.A.Sc. thesis	Successful completion of Ph.D. dissertation
3- Level of Application of Knowledge	Conducting independent research and creative activities with guidance that results in contributions to the body of existing knowledge of their chosen fields	Conducting research independently through defining, planning and solving of scientific problems to lead and advance knowledge in the field of specialization. Research outcomes lead to creativity and competence at an international level
4- Professional Capacity / Autonomy	- Core courses will involve activities to obtain professional skills and experiences in conducting independent and group projects - Every student has to successfully complete the Engineering Ethics course. - Every student has to successfully complete a complementary education and training course in one of the following area: a) Legal Aspects and Governance in Engineering b) The Arts and Science of Scholarly Writing c) Entrepreneurship and Technology Ventures or d) Teaching and Learning in Post-Secondary Education - Students get advice and guidance from supervisors throughout their studies, when preparing presentations for graduate seminars or conferences, and when writing scientific papers, to commit to implementation of professional and ethical standards as well as sustainable practices related to research and professional activities - Students submit Activity Reports annually to supervisory committees for review and approval. The supervisor committee plays a key role in evaluating the students' progress on an annual basis, and supporting and advising the student moving forward.	
	- M.A.Sc. students will learn to become independent researchers and to make decisions with guidance to advance their research when encountered complex obstacles	- Ph.D. researchers will take responsibility and devise creative solutions after identifying complex problems
5- Level of Communication Skills	- Students have to take the Graduate Seminar course and present research results and future plans in written (Student Activity Report) and oral formats annually. - Graduate courses involve projects that will be presented to the class and course directors in the form of reports and presentations. <i>Optional:</i> - Students are expected to attend conferences and workshops and to present their work to academic and industrial audience of a wide variety of technical background - Students have the choice of taking ENG 6002 The Arts and Sciences of Scholarly Writing as part of one of the courses under complementary education and training. - Graduate students will act as Teaching Assistants of undergraduate courses and deliver occasional lectures, laboratory tutorials and demonstrations to undergraduate students	
	- Students submit M.A.Sc. theses	- Students submit PhD dissertations
6- Awareness of Limits of Knowledge	- Every graduate student has to complete the Master's thesis or PhD dissertation which will describe the critical component about their research contributions, limitations and future scope of expanding the research topic.	

5.3 Address how the methods and criteria for assessing student achievement are appropriate and effective relative to the program learning outcomes and Degree Level Expectations.

Graduate students' performance and progress at Mechanical Engineering department will be assessed continuously by a variety of methods and criteria in both their coursework and research-related activities. These methods and criteria will ascertain that the program learning outcomes are achieved and the GDLEs are met. The particular assessment tools and methods that are used to evaluate the program structural components (discussed in section 5.2) and their relations to the program learning outcomes (discussed in section 5.1) and GDLEs for M.A.Sc. and Ph.D. degrees are listed in Tables 5.3.1 and 5.3.2, respectively.

Table 5.3.1 Student assessment methods and criteria and their alignment with GDLEs of M.A.Sc. program

Degree Level Expectation	Program Learning Outcomes	Student Assessment Methods and Criteria
<p>1- Depth and Breadth of Knowledge</p>	<ul style="list-style-type: none"> ▪ Critically assess a complex problem with opposing and conflicting positions ▪ Systematically review, analyze, assimilate and interpret a body of scientific literature and innovations in discipline area 	<p>Every M.A.Sc. student must:</p> <ul style="list-style-type: none"> ▪ successfully defend his/her thesis in an examination session following guidelines specified by the Faculty of Graduate Studies at York University. This involves submission of written thesis and completion of an oral defense. Details provided in Appendix C. ▪ obtain a minimum grade of B- to successfully pass any of the required courses according to the degree requirements. These courses will involve a combination of oral and written examinations, term projects, assignments, case studies, field visits, technical reports and/or presentations. Course details provided in Appendix E. ▪ submit a Student Activity Report and deliver a 15 min presentation at the graduate seminar event and attend at least 80% of the presentations to receive a pass grade. The report and the presentation are assessed by referee faculty members based on a provided rubric (see Appendix B for detailed information)
<p>2- Research and Scholarship</p>	<ul style="list-style-type: none"> ▪ Evaluate techniques of research and inquiry ▪ Apply appropriate techniques of research and inquiry to create and interpret knowledge in the discipline ▪ Critique current research and scholarship in the area of professional competence ▪ Analyze complex issues and judgments in the field using established principles and techniques ▪ Design a method of inquiry to explore a research question in the field 	<ul style="list-style-type: none"> ▪ Research progress is mainly assessed by the supervisors in a variety of methods such as weekly, biweekly and/or monthly group and one-on-one meetings, progress reports and annual meetings with supervisory committees involving submission of Activity Reports and delivery of oral presentations ▪ The M.A.Sc. theses will be evaluated by a committee with domain knowledge expertise and one graduate faculty member at arm's length from the dissertation, usually from outside the ME department. ▪ Students must successfully defend their thesis in Oral Examinations which also will be assessed by the examination committee following FGS guidelines ▪ Every student has to successfully complete the Graduate Seminar Series course.
<p>3- Level of Application of Knowledge</p>	<ul style="list-style-type: none"> ▪ Critically assess complex problems from the stakeholders viewpoint ▪ Extrapolate limitations of experimental method and propose revised methodology for future research ▪ Apply and validate innovations and discoveries in the lab or real world settings in more efficient and effective ways 	<ul style="list-style-type: none"> ▪ Publication of innovative research results in peer-reviewed journals and attendance at prestigious internationally-known conferences can be considered for evaluation of students' performance in advancing the level of knowledge in their fields, as recorded in Student Activity Report (Appendix D). ▪ Level of application of knowledge is assessed by the supervisor and also by the committee members during yearly meetings, with consideration of the student performance in his/her coursework

Degree Level Expectation	Program Learning Outcomes	Student Assessment Methods and Criteria
<p>4- Professional Capacity / Autonomy</p>	<ul style="list-style-type: none"> ▪ Evaluate accountability lines within ethical code structure and legal requirements and design research methods that incorporate appropriate ethical and legal requirements ▪ Evaluate industry standards to guide professional practice and incorporate these requirements into one's research ▪ Create design solutions that take ethical, social, environmental, legal and regulatory influences into account ▪ Predict potential economic, societal, environmental, health, and/or safety risks and benefits of performing a particular engineering task and propose alternative designs to mitigate risks ▪ Integrate professional, social, and environmental considerations into decision analyses ▪ Design research projects that take ethical, social, environmental, legal and regulatory influences into account ▪ Comply with relevant laws, regulations, intellectual property guidelines and contractual obligations and follow best practices in conceptualizing research design projects, which is more emphasized for students who take ENG6001 ▪ Develop concise and coherent reports/academic papers and design documents that reflect critical analysis and synthesis of research 	<ul style="list-style-type: none"> ▪ Students must receive a pass grade on a mandatory Engineering Ethics course and one complementary education and training course. Assessment for the complimentary education and training course will be done by traditional midterm and final examinations, case studies, assignments, oral presentations and in-class participation and discussions ▪ Project components in each course will carry a certain percentage of the final grades and will be assessed by the course directors. Students are expected to submit written reports and articles as well as to deliver in-class presentation and demonstrations on these projects ▪ Teaching assistants (if applicable) will be evaluated by undergraduate students during the course evaluation process that is conducted by York University. ME department will provide the results of these evaluations to the TA graduate students
<p>5- Level of Communication Skills</p>	<ul style="list-style-type: none"> ▪ Construct a credible argument and design appropriate formats to convey position ▪ Critically evaluate reports, design documents and academic papers and present findings to justify one's position ▪ Present material in a coherent and organized form, using an appropriate combination of media, to a variety of audiences 	<ul style="list-style-type: none"> ▪ Presentation skills will be evaluated during the graduate seminar event by two faculty members as session referees, and fellow graduate students. Evaluations will be used to determine a grade for this course and for selection of the best presenter ▪ Students' Activity Reports will be assessed by supervisors and committee members on a yearly basis. ▪ These will be evaluated by examination committees following instructions provided by FGS
<p>6- Awareness of Limits of Knowledge</p>	<ul style="list-style-type: none"> ▪ Justify the strength and limitations of identified research solutions and propose questions and methods for future research 	<ul style="list-style-type: none"> ▪ Students are expected to include a section in their theses to discuss the limitations and future directions of the conducted research.

Table 5.3.2 Student assessment methods and criteria and their alignment with GDLEs of Ph.D. program

Degree Level Expectation	Program Learning Outcomes	Student Assessment Methods and Criteria
1- Depth and Breadth of Knowledge	<ul style="list-style-type: none"> ▪ Critically assess a complex problem with opposing and conflicting positions ▪ Systematically review, analyze, assimilate and interpret a body of scientific literature and innovations in a number of fields outside ones area of research but pertinent to the research being undertaken ▪ Identify gaps in the literature and opportunities for new research to address shortcomings in the field 	<p>Every Ph.D. student must:</p> <ul style="list-style-type: none"> ▪ pass the Ph.D. comprehensive examination within 12 months of commencing the program (see Appendix C). ▪ successfully defend his/her dissertation in an examination session following guidelines provided by the Faculty of Graduate Studies at York University. This involves submission of written dissertation and completion of an oral defense. ▪ obtain a minimum grade of B- to successfully pass any of the required courses. These courses will involve a combination of oral and written examinations, term projects, assignments, case studies, field visits, technical reports and/or presentations ▪ submit a Student Activity Report and deliver a 15 min presentation at the graduate seminar event and attend at least 80% of the presentations to receive a pass grade. The report and the presentation are assessed by referee faculty members based on a provided rubric. See appendix B for details.
2- Research and Scholarship	<ul style="list-style-type: none"> ▪ Identify novel and significant open research questions ▪ Design research projects to investigate a research question which addresses a gap in the field/discipline ▪ Define and defend a research method and analyses that will achieve the research goals ▪ Revise research design and methodology to account for limitations of the original design ▪ Speculate how the proposed research will address a gap in the field ▪ Speculate how applications of findings would impact the broader body of knowledge and disciplines ▪ Strategize how to address unforeseen outcomes of research by developing a new method of research in the field ▪ Formulate possible modes of solving a research question and decide upon appropriate method by comparing and contrasting complex issues in a specialized field ▪ Critically analyze ideas and data presented at conferences by others and participate in a peer review process 	<ul style="list-style-type: none"> ▪ Research progress is mainly assessed by the supervisors in a variety of methods such as weekly, biweekly and/or monthly group and one-on-one meetings, progress reports and annual meetings with supervisory committees involving submission of Activity Reports and delivery of oral presentations ▪ The Ph.D. dissertations will be evaluated by a committee with domain knowledge expertise and one graduate faculty member at arm's length from the dissertation, usually from outside the ME department. ▪ Students must successfully defend their dissertation in Oral Examinations which also will be assessed by the examination committee following FGS guidelines ▪ Every student has to successfully complete the Graduate Seminar Series course
3- Level of Application of Knowledge	<ul style="list-style-type: none"> ▪ implement research experimentation independently without supervision ▪ Conduct independent research appreciating limitations of one's knowledge and seeking support and advice when warranted ▪ Identify and design new tools to assist with experimentation 	<ul style="list-style-type: none"> ▪ Publication of innovative research results in peer-reviewed journals and attendance at prestigious internationally-known conferences can be considered for evaluation of students' performance in advancing the level of knowledge in their fields as recorded in Student Activity Report (Appendix D). ▪ In addition to assessments stated for M.A.Sc. students, each PhD student is required to pass the Ph.D. comprehensive examination within 12 months of the program (see Appendix C). Candidate must propose and successfully defend a research proposal that leads and advances knowledge in the field of specialization

Degree Level Expectation	Program Learning Outcomes	Student Assessment Methods and Criteria
4- Professional Capacity / Autonomy	<ul style="list-style-type: none"> ▪ Accept responsibility for one’s research ▪ Evaluate multidimensional appropriateness of possible courses of action in research experimentation and make autonomous decisions in ways to move forward ▪ Evaluate individual progress towards meeting program requirements and timelines ▪ Before engaging in academic debate evaluate literature to remain up-to-date on findings in the field ▪ Evaluate how ethical, social, environmental, legal and regulatory influences may affect the discipline of one’s research differently than other fields of research ▪ Evaluate how non-compliance with relevant laws, regulations, intellectual property guidelines and contractual obligations may create risks in managing one’s research, which is more emphasized for students who take ENG6001 ▪ Analyze the critical debates within ones field and more broadly within related fields and predict/identify possible implications of one’s research outcomes 	<ul style="list-style-type: none"> ▪ Students must receive a pass grade on a mandatory Engineering Ethics course and one complementary education and training course. For the complementary education and training course, assessment will be done by traditional midterm and final examinations, case studies, assignments, oral presentations and in-class participation and discussions ▪ Project components in each course will carry a certain percentage of the final grades and will be assessed by the course directors. Students are expected to submit written reports and articles as well as to deliver in-class presentation and demonstrations on these projects ▪ Teaching assistants (if applicable) will be evaluated by undergraduate students during the course evaluation process that is conducted by York University. ME department will provide the results of these evaluations to the TA graduate students
5- Level of Communication Skills	<ul style="list-style-type: none"> ▪ Present material in a coherent and organized form in a public setting, using an appropriate combination of media, to a variety of audiences ▪ Listen carefully and gather feedback and opinions ▪ Debate one’s research position in an open forum ▪ Present research findings or proposal of design at an academic conference 	<ul style="list-style-type: none"> ▪ Presentation skills will be evaluated during the graduate seminar event by two faculty members as session referees, and fellow graduate students. Evaluations will be used to receive a passing grade for this course and for selection of the best presenter ▪ Students’ Activity Reports will be assessed by supervisors and committee members on a yearly basis. ▪ Dissertations will be evaluated by examination committees following instructions provided by FGS
6- Awareness of Limits of Knowledge	<ul style="list-style-type: none"> ▪ Explain how research findings affect multidisciplinary lines between various research fields and disciplines ▪ Identify how assumptions of one’s research may be understood differently within different disciplines 	<ul style="list-style-type: none"> ▪ Ph.D. students will have to identify scientific gaps in their field of specialization and propose innovative, creative and independent research during their comprehensive examination that will be assessed by the committee members ▪ Students are expected to include a section in their theses/dissertations to discuss the limitations and future directions of the conducted research

5.4 For graduate programs, indicate the normal full-time program length (i.e. the length of time in terms in which full-time students are expected to complete the program) including a description of how students’ time-to-completion will be supported and managed to ensure that the program requirements can be reasonably completed within the proposed time period. Indicate if the program will be available on a part-time basis, and, if applicable, explain how students’ time-to-completion will be supported and managed to ensure that the program requirements can be reasonably completed on a part-time basis.

The graduate program in Mechanical Engineering will offer two graduate degrees – M.A.Sc. and Ph.D.

For M.A.Sc., the expected degree completion time is 6 terms (2 years) on a full-time enrolment basis. For Ph.D., the expected degree completion time is 12 terms (4 years) on a full-time enrolment basis.

The time-to-completion is supported by an effective supervisory committee and also the requirement of providing Annual Progress Report by each registered graduate student to the supervisory committee as regulated by FGS. In addition, the Mechanical Engineering Graduate Program Director will oversee all students progress and activities (such as completion of required graduate courses, students participation in graduate seminars, etc.) to ensure that master and doctoral students fulfill the overall FGS institutional requirements and the mechanical engineering graduate program requirements.

5.5 Describe the proposed mode(s) of delivery, including how it/they are appropriate to and effective in supporting the program learning outcomes.

Since the modes of delivery and the associated learning outcomes differ from course to course, students will be exposed to a blend of the items indicated in table 5.5.1 in each course.

Table 5.5.1 Mechanical Engineering Graduate Courses Proposed Modes of Delivery

Program Activities	Mode(s) of delivery	Relevance to the program learning outcomes Under the proposed delivery methods students will be able to:
MECH 6101 to 6501 MECH 6000	<ul style="list-style-type: none"> - Delivery in regular lecture rooms using active learning strategies - Case Studies and Problem-Based Learning - Group/team projects - Presentations, discussions and self-learning activities - Computational and/or experimental laboratory components - Annual research seminar (MECH 6000) 	<ul style="list-style-type: none"> - Critically assess a complex problem with opposing and conflicting positions - Systematically review, analyze, assimilate and interpret a body of scientific literature and innovations in discipline area - Construct a credible argument and design appropriate formats to convey position - Critically evaluate reports, design documents and academic papers and present findings to justify one's position - Present material in a coherent and organized form, using an appropriate combination of media, to a variety of audiences - Present material in a coherent and organized form, using an appropriate combination of media, to a variety of audiences
ENG 6000 ENG 6001 ENG 6002 ENTR 6xxx EDUC 5414	<ul style="list-style-type: none"> - Delivery in regular lecture rooms using active learning strategies - Case Studies and Problem-Based Learning - Group/team projects - Presentations, discussions and self-learning activities 	<ul style="list-style-type: none"> - Evaluate accountability lines within ethical code structure and legal requirements and design research methods that incorporate appropriate ethical and legal requirements - Evaluate industry standards to guide professional practice and incorporate these requirements into one's research - Create design solutions that take ethical, social, environmental, legal and regulatory influences into account - Predict potential economic, societal, environmental, health, and/or safety risks and benefits of performing a particular engineering task and propose alternative designs to mitigate risks - Integrate professional, social, and environmental considerations into decision analyses - Design research projects that take ethical, social, environmental, legal and regulatory influences into account - Comply with relevant laws, regulations, intellectual property guidelines and contractual obligations and follow best practices in conceptualizing research design projects - Develop concise and coherent reports/academic papers and design documents that reflect critical analysis and synthesis of research

Table 5.5.2 Mechanical Engineering Graduate Thesis and Dissertation Modes of Delivery

Program Activities	Mode(s) of delivery	Relevance to the program learning outcomes Under the proposed delivery methods students will be able to:
MECH 9001	<ul style="list-style-type: none"> - Supervision and mentorship by individual faculty members - Annual student progress report - Thesis exam committee meeting 	<ul style="list-style-type: none"> - Critically assess a complex problem with opposing and conflicting positions - Systematically review, analyze, assimilate and interpret a body of scientific literature and innovations in discipline area - Evaluate techniques of research and inquiry - Apply appropriate techniques of research and inquiry to create and interpret knowledge in the discipline - Critique current research and scholarship in the area of professional competence - Analyze complex issues and judgments in the field using established principles and techniques - Design a method of inquiry to explore a research question in the field - Critically assess complex problems from the stakeholders viewpoint - Extrapolate limitations of experimental method and propose revised methodology for future research - Apply and validate innovations and discoveries in the lab or real world settings in more efficient and effective ways - Construct a credible argument and design appropriate formats to convey position - Critically evaluate reports, design documents and academic papers and present findings to justify one's position - Present material in a coherent and organized form, using an appropriate combination of media, to a variety of audiences - Justify the strength and limitations of identified research solutions and propose questions and methods for future research

Program Activities	Mode(s) of delivery	Relevance to the program learning outcomes Under the proposed delivery methods students will be able to:
MECH 9002	<ul style="list-style-type: none"> - Supervision and mentorship by individual faculty members - Doctoral comprehensive examination - Annual student progress reports - Annual committee meetings - Doctoral dissertation exam committee meeting 	<ul style="list-style-type: none"> - Critically assess a complex problem with opposing and conflicting positions - Systematically review, analyze, assimilate and interpret a body of scientific literature and innovations in a number of fields outside ones area of research but pertinent to the research being undertaken - Identify gaps in the literature and opportunities for new research to address shortcomings in the field - Identify novel and significant open research questions - Design research projects to investigate a research question which addresses a gap in the field/discipline - Define and defend a research method and analyses that will achieve the research goals - Revise research design and methodology to account for limitations of the original design - Speculate how the proposed research will address a gap in the field - Speculate how applications of findings would impact the broader body of knowledge and disciplines - Strategize how to address unforeseen outcomes of research by developing a new method of research in the field - Formulate possible modes of solving a research question and decide upon appropriate method by comparing and contrasting complex issues in a specialized field - Critically analyze ideas and data presented at conferences by others and participate in a peer review process - implement research experimentation independently without supervision - Conduct independent research appreciating limitations of one's knowledge and seeking support and advice when warranted - Identify and design new tools to assist with experimentation - Accept responsibility for one's research - Evaluate multidimensional appropriateness of possible courses of action in research experimentation and make autonomous decisions in ways to move forward - Evaluate individual progress towards meeting program requirements and timelines - Present material in a coherent and organized form in a public setting, using an appropriate combination of media, to a variety of audiences - Listen carefully and gather feedback and opinions - Debate one's research position in an open forum - Present research findings or proposal of design at an academic conference - Explain how research findings affect multidisciplinary lines between various research fields and disciplines - Identify how assumptions of one's research may be understood differently within different disciplines

6. Admission Requirements

6.1 Describe the program admission requirements, including how these requirements are appropriately aligned with the program learning outcomes.

The minimum admission requirements to the Master’s program in the Department of Mechanical Engineering are those of the current admission requirements as described by FGS:

- B for the Master’s program in the final year of undergraduate study.

The minimum admission requirements to the Ph.D. program in the Department of Mechanical Engineering are those of the current admission requirements as described by FGS:

- B for entry into the Ph.D. program in each of the previous two years of graduate studies; and

Applicants must be a graduate from relevant Engineering programs (e.g., Mechanical Engineering, Material Engineering, Electrical Engineering) or Sciences programs (e.g., Physics, Chemistry, Biology).

For applicants who have not completed four full years of studies at the secondary-school level or university level in a country where English is a primary language or where English is the primary language of instruction,

they must demonstrate their language proficiency in English. Accepted tests include TOEFL, IELTS, YELT and others. Detailed scores can be found here: http://futurestudents.yorku.ca/requirements/language_tests.

The research activities in the Mechanical Engineering graduate program as described in Section 4 draw from and rely heavily on understanding of concepts and skills in Engineering Sciences, Mathematics, Physics, Biology and/or Chemistry. Furthermore, with the objectives of the proposed graduate to develop students' skills and experiences in complementary areas, including teaching and mentoring as well as communications, English language skills are important. Taken all together, admission requirements for the program are appropriately aligned with the program learning outcomes.

6.2 Explain any alternative requirements, if any, for admission into an undergraduate, graduate or second-entry program, such as minimum grade point average, additional languages or portfolios, along with how the program recognizes prior work or learning experience.

Not applicable.

7. Resources

7.1 Comment on the areas of strength and expertise of the faculty who will actively participate in delivering the program, focusing on its current status, as well as any plans in place to provide the resources necessary to implement and/or sustain the program.

The Department of Mechanical Engineering at York University was established in 2013 as one of the major building blocks of the Lassonde School of Engineering (LSE). Since January 2013, seven faculty members (two Professors, two Associate Professors and three Assistant Professors) have been hired as stipulated in the LSE planning document to establish the required foundations to deliver the undergraduate and graduate programs in Mechanical Engineering. Also, we have cross-appointed a faculty member from Earth and Space Science Engineering (in Professor rank) into the Mechanical Engineering program to augment further the graduate teaching and learning for the department. The hiring of an Alternative Stream (Lecturer) faculty member is currently taking place and a request to hire two more faculty members has been approved by the office of the dean for the year 2015. The hiring process at the Department of Mechanical Engineering will continue on a rolling basis over the next seven years in order to reach a full faculty capacity of 23 faculty members by 2021.

The undergraduate Mechanical Engineering program at the Lassonde School of Engineering was approved by the Ontario Universities Council on Quality Assurance in August 2013 and the first cohort of students were admitted in September 2014. The demand for the undergraduate program on the first year has been tremendously astonishing with more than a thousand applicants for 55 vacant positions. Historically, graduate and undergraduate programs have been tightly interconnected and complementary to one another in both research and teaching aspects. For instance, graduate students can play an important role in assisting course directors for delivering undergraduate lab tutorials and lectures, and undergraduate students with interest in research can participate in summer research positions and work with graduate students and faculty members. Accordingly, the proposed graduate program in Mechanical Engineering at LSE is essentially needed at this stage and will have its focus on both research and teaching components of education.

The current faculty members of the department have been provided with generous start-up funds from LSE to establish their research laboratories and to recruit outstanding graduate students. These faculty members have been provided with office and laboratory spaces at the Life Sciences Building and access to its state-of-the-art infrastructure. They have expertise in the core and emerging areas of Mechanical Engineering (e.g. thermo-fluids, fluid mechanics, design, solid mechanics, materials and manufacturing, microfluidics and thermo-photonics). They have established six research laboratories in the Department of Mechanical Engineering since January 2013, namely the Surface Engineering and Instrumentation Laboratory (Dr. A. Amirfazli), Innovative Design Engineering and Analysis Laboratory (Dr. A. Czekanski, NSERC Design Chair in Engineering), Micro and Nano-Scale Transport Laboratory (Dr. S. Mitra), Multifunctional Materials, Micro- and Nano-Structuring Laboratory (Dr. S. N. Leung), Advanced Centre for Microfluidics Technology and Engineering

(Dr. P. Rezai), and Hybrid Biomedical Optics Laboratory (Dr. N. Tabatabaei). Also, through cross-appointment, Materials and Structure Laboratory (Dr. G. Zhu) is also available.

As a partial requirement towards the completion of graduate studies in Mechanical Engineering department M.A.Sc. and Ph.D. students should pass a certain number of graduate-level courses (Section 4) and also contribute to the delivery of undergraduate courses as teaching assistants to the course directors. This further intensifies the requirement of establishing a graduate program at the Department of Mechanical Engineering since the first class of undergraduate students will tentatively enter the department in September 2015. The current six faculty members will be able to plan and deliver the undergraduate program in the academic year of 2014-2015. With the newly hired faculty members in consequent years, it will be assured that the teaching and administration demands of the undergraduate program will be satisfied while the students entering their higher academic years and new students get admitted into the program. Each faculty member is also expected to teach at least one graduate-level course (Section 4.2 and Appendix A) so that graduate students coursework can be fully supported at the department level. At this stage, courses in polymer composites and nano-composites, micro and nano-fluidics, continuum mechanics, FEM, interfacial phenomena, engineering mathematics, dynamics, waves and optics as well as heat transfer are being developed and proposed to the Faculty of Graduate Studies at York University.

The hiring plan for the next year at the department is to recruit four more faculty members in the areas of solid mechanics, control and measurement, energy and heat transfer. Office and laboratory spaces are allocated to them in the new building, the Bergeron Centre for Engineering Excellence that is currently under construction on York University's Keele campus (see Sections 7.3 and 7.4). This will prepare the department to launch cutting edge research programs in established and emerging areas of Mechanical Engineering. The Alternate Stream faculty member that will be hired by early 2015 will aim to spearhead the experiential learning component of the curriculum, execute the communication education across curriculum strategy, and lead and inform the professional (regular) stream faculty in teaching methods that are stipulated in the Lassonde School of Engineering philosophy (e.g. using technology for out-of-class learning).

In addition to attracting professional faculty members to the department, we will also establish strategic partnerships with the Schulich School of Business, Osgoode Hall Law School and Teaching Commons at York University to deliver complementary graduate-level courses and training to the graduate students that will make them unique and competent (i.e. "Renaissance Engineers") in the job market and the academic world as discussed in Section 4.2.

7.2 Comment on the anticipated role of retired faculty and contract instructors in the delivery of the program, as appropriate.

Not applicable.

7.3 As appropriate identify major laboratory facilities/equipment that will be available for use by undergraduate and/or graduate students and to support faculty research, recent acquisitions, and commitments/plans (if any) for the next five years.

The current faculty members (i.e., two Professors, two Associate Professors, and three Assistant Professors) of the Department of Mechanical Engineering have established their research laboratories at the Life Sciences Building, located in the Keele campus of York University. These research laboratories, outlined in Section 7.1, are equipped with a wide range of state-of-the-art infrastructure. These include sample and material fabrication facilities (e.g., batch foaming system, compression molding system, lab-scale thermoforming system, plasma oxidizer, sonicator, thermal bath, wet chemical stations), as well as characterization equipment (e.g., fluorescent microscope, high speed digital cameras, spray characterization equipment, thermal conductivity analyzers, wettability measurement equipment). With the continuous hiring of new faculty members over the next few years and the expansion of the current research laboratories, it is expected that the list of major laboratory facilities available for use by graduate students and to support faculty research will continue to expand rapidly.

Faculty members and their research teams also have access to leading-edge technologies for advanced imaging and analysis in other faculties at York University. For instance, advanced imaging facilities include an

environmental scanning electron microscope, a spinning disk confocal system, a confocal microscope, a multiphoton imaging system. Specialized analytical facilities include a high resolution mass spectrometer, a 700 MHz nuclear magnetic resonance spectrometer, fluorescence activated flow cytometer, scanning ion-selective electrode technique and scanning vibrating electrode technique. Environmental testing facilities include thermal vacuum chamber, vacuum oven, shake/vibration table, rotating air bearing table. Furthermore, faculty research is also supported by full technical service facilities, including an electronic shop, a machine shop, a student machine shop, and a glassblowing shop, and two science stores.

High performance computing facilities are available for faculty research through SHARCNET, which is a consortium of 18 Canadian academic institutions who share a network of high performance computers to enable world-class research. A suite of software tools under the four categories of the CAD, Data Acquisition and Analysis, Simulation, and Office and Teamwork Productivity has been identified and will be installed in the laboratories as needed; this will be supported by an IT team within the Lassonde School of Engineering. For examples, a number of engineering software for CAD (e.g., Creo, SolidWorks), data acquisition (e.g., Labview), simulation (e.g., MATLAB), multiphysics analysis (e.g., ANSYS) are either currently available or will be purchased for faculty research.

In addition to the aforementioned facilities, a brand new 167,500 sq. ft. engineering complex, the Bergeron Centre for Engineering Excellence will be ready in the fall of 2015. At that time Mechanical Engineering faculty members and students will have their various specialized facilities (e.g. laboratories, a machine shop, and a workshop) to support their research in addition to the laboratories of their academic supervisors. In particular, the building will be housing the following facilities: Thermofluid lab, Fluid Mechanics and Hydraulics lab, Heat Transfer and Engine lab, Metrology lab, Advanced Manufacturing lab, Materials and Structural Testing lab, a Class 10,000 Cleanroom (116.55 m² area), Prototyping workshop, six group work rooms, Computer labs, and student projects area. There are 15 faculty offices at 11.32 m² per office with a total space of 170 m²; meeting room, storage, coffee/lunch with a space of 55m²; graduate student open office space of 320 m²; computational rooms with a space of 112 m². There will be 4 lab spaces with wet benches (each space around 50 m²); 3 lab spaces with dry benches (each space around 47 m²); and a fully functional machine shop to support in-house research activities with floor space of 660 m². A list of existing and future equipment for each of the laboratories has been prepared and submitted to the facilities manager for the Lassonde School of Engineering. He has been working with the building group to ascertain fitting requirements and services for the equipment to operate will be in place and equipment will be purchased and installed.

[7.4 As appropriate, provide information on the office, laboratory and general research space available that will be available for faculty, undergraduate and/or graduate students; the availability of common rooms for faculty and graduate students; administrative space; as well as any commitments/plans \(if any\) for the next five years.](#)

Currently, the Department of Mechanical Engineering encompasses in its capacity the fourth floor of the recently built Life Science Building (approximately 25,000 sqft). It includes office and research spaces for faculty members and more than half of its available area is dedicated to graduate research laboratories in addition to nearly 100 graduate student desk spaces in an open concept environment. .

The construction and preparation of the Bergeron Centre for Engineering Excellence will be completed and ready for use in 2015. In addition to the currently available Life Science Building, the new building will have all the required space and infrastructure for the projected teaching, research and experimental activities in the Department of Mechanical Engineering. The entire fourth floor will be dedicated to the mechanical engineering faculty and graduate research laboratories, while the first floor will support both undergraduate and graduate student activities, research projects including prototype workshop, mechanical and machine shops, six group work rooms and ten open space zones/project areas, as well as small student projects sections. Technical support staff will have office spaces next to the laboratories or workshop regions for better and more efficient support and integration with student activities. These facilities will offer superior support and supervision for all mechanical engineering students. Furthermore, the new building will have a number of meeting and project discussion zones to facilitate out-of-class learning; this is augmented by the special design of the building architecture that has envisioned various “social learning spaces” where students can interact amongst themselves or with faculty/staff members.

7.5 As appropriate, comment on academic supports and services, including information technology, that directly contribute to the academic quality of the program proposed.

The Department of Mechanical Engineering will require support and services in five major categories in order to successfully deliver the proposed graduate program. These categories are listed below and the plans to fulfill the requirements are discussed. A faculty member at the department who will be appointed as the Graduate Program Director will be responsible for administration of these activities. As such, he/she should be provided with appropriate teaching relief as per terms of York University's Collective Agreement.

1- *Information Technology (IT)*: Support for IT at the department will be mainly provided from the Faculty level as per our current agreement in-place with LSE. A number of major software tools for CAD (e.g. Creo, SolidWorks), Data Acquisition (e.g. LabVIEW), Simulation (e.g. MATLAB) and Office and Teamwork Productivity have already been identified by the current faculty members and the required number of licenses have been communicated with IT staff in LSE. Any specialized software (used by only a single research group) is expected to be purchased and maintained by individual faculty members at the department.

2- *Technical support*: The department is in need of two technical support staffs, i.e. a Mechanical Engineering and an Electrical Engineering Technologist. The Mechanical Engineering Technologist will be partially responsible for helping faculty members and their graduate students to setup their laboratories, equipment and major experimental setups while also running the machine shop and fabrication facilities and maintaining the undergraduate laboratories at the Department of Mechanical Engineering. The hiring of the Mechanical Engineering Technologist has already been completed. The Electrical Engineering Technologist will assist the faculty members and graduate students with their software and computer hardware inquiries while also making sure that all the undergraduate-level computer labs are operated flawlessly.

3- *Office support*: The Faculty of Graduate Studies at York University is fully staffed and will oversee the process of graduate student recruitment and admission. In terms of support staff for delivery of the graduate program in Mechanical Engineering, many roles in terms of supporting student clubs, student engagement, experiential education, financial support, academic honesty, mentorship, and advising will be provided and supported by the Student Welcome and Support Centre, with currently 7 full-time administrative positions supporting these areas. Additionally, the Lassonde Dean's Office provides administrative oversight and support for communications, recruitment and admissions, as well as research administrative support through an additional 5 full-time administrative positions. The Department of Mechanical Engineering is also supported by a full-time administrative assistant, with plans to hire a full-time graduate program assistant, as faculty and student complement warrant full-time support.

4- *Resources*: One of the key elements for a successful graduate program is to allow the faculty members and the graduate students to have access to the most recent scientific contents and research activities within their areas of specialty. York University is well advanced in this aspect. Mechanical Engineering students have access to a host of core textbooks at the Steacie Science and Engineering Library. The library also provides students with access to database resources, such as Knovel, Web of Science and Engineering Village where students can actively search for research and development advancements in many different disciplines of Mechanical Engineering. The Engineering Librarians have also been very supportive in providing faculty members with access to journal articles that York University had not subscribed to in the past.

5- *Research Facilities*: There are a number of key pieces of equipment and facilities that are needed commonly by the majority of faculty members in the Department of Mechanical Engineering and their graduate students for the purpose of conducting research. For instance, for the analysis of materials and surfaces down to a microstructural level, many research disciplines from metal forming to micro-engineering will require access to state-of-the-art material testing facilities, microscopy facilities (optical, fluorescent, scanning electron microscopy and transmission electron microscopy), imaging (e.g. cameras) and image processing tools (e.g. MATLAB). Micro- and nano-fabrication equipment is also among the same category of commonly-used facilities in Mechanical Engineering. Accordingly, the Bergeron Centre for Engineering Excellence that is going to house our department in the Fall of 2015 will be equipped with facilities such as a "Class 10,000" cleanroom, machine shop labs and equipment, microscopy and imaging instruments, and custom-designed laboratories that will facilitate research and innovation in various fields of Mechanical Engineering, the details of which are already provided in Section 7.3.

7.6 For graduate programs, indicate financial support that will be provided to master’s and/or PhD students, including how this support will be sufficient to ensure adequate quality and numbers of students. Comment on how supervisory loads will be distributed, as appropriate. Special attention should be paid to supervisory capacity for new PhD programs.

The proposed graduate program in Mechanical Engineering will commit to promote excellence in research and teaching for graduate students. Master’s and/or Ph.D. students can expect annual financial support, comprising a package of Scholarships and/or Research, Teaching, and Financial Assistantships, valid for up to two years and four years, respectively. Table 7.6.1 summarizes the breakdown of the financial support to the four categories of graduate students (i.e., domestic M.A.Sc. students, international M.A.Sc. students, domestic Ph.D. students, and international PhD student) as of 2014-2015 Academic Year as well as the net amounts of financial support to them after the deduction of their tuition fees.

Table 7.6.1. Annual financial support to Master’s and Ph.D. students in the proposed graduate program

Source	M.A.Sc. Domestic	M.A.Sc. International	Ph.D. Domestic	Ph.D. International
LSE RA	\$5,500	\$14,000	\$6,000	\$14,000
TA	\$7,000	\$7,000	\$7,000	\$7,000
Supervisor RA	\$8,500	\$14,000	\$10,000	\$16,000
Gross amount	\$21,000	\$35,000	\$23,000	\$37,000
Tuition fees	\$5,500	\$19,500	\$5,500	\$19,500
Net amount	\$15,500	\$15,500	\$17,500	\$17,500

The aforementioned funding support to Master’s and Ph.D. students will be comparable or better than other graduate programs in Ontario (e.g., the University of Toronto’s graduate program for Mechanical Engineering guarantees a minimum of \$15,000/year for living expenses, plus tuition and fees). Therefore, the competitive funding packages, together with our state-of-the-art research and laboratory facilities/equipment, will ensure the proposed graduate program to attract adequate quality and numbers of students.

In addition, all graduate students are encouraged to apply for external government awards and other awards tenable at York University. Some examples of high-profile external scholarships are:

- Ontario Graduate Scholarships (OGS);
- Ontario Trillium Scholarship (OTS);
- Canada Graduate Scholarships (CGS);
- The Canadian Institutes of Health Research (CIHR);
- Natural Sciences and Engineering Research Council of Canada (NSERC); and
- Vanier Canada Graduate Scholarships (Vanier CGS).

The supervisory loads of Master’s and Ph.D. students will initially be shared among the currently appointed faculty members, comprising two Full Professors, two Associate Professors, and three Assistant Professors. It is expected that each faculty member will supervise an average of two Master’s students and one Ph.D. student initially upon kick-off of the proposed graduate program, and this number is expected to ramp up gradually. Together with the continuous hiring of new faculty members per year for the next few years (i.e., up to 23 faculty members by year 2021), sufficient supervisory capacity will be available to support the supervision of adequate number of high quality graduate students in the proposed graduate program in Mechanical Engineering.

Table 1 – Listing of Faculty

For graduate programs: Identify all full-time faculty, retired faculty, adjuncts and contract instructors who will be appointed to and who will actively participate in delivering the program, as follows:

Faculty Name & Rank	Home Unit	Primary Graduate Program (yes/no)	Area(s) of Specialization or Field(s)		
			Area/Field 1	Area/Field 2	Area/Field 3
Full Members (<i>Note: does not apply to master's-only programs</i>)					
Alidad Amirfazli, Professor	Mechanical Engineering	YES	Thermofluids	Surface Engineering	Surface Thermodynamics
Alex Czekanski, Associate Professor	Mechanical Engineering	YES	Computational Mechanics	Finite Element Analysis	Experimental Mechanics
Siu N. (Sunny) Leung, Assistant Professor	Mechanical Engineering	YES	Advanced manufacturing	Multifunctional and smart materials	Sustainable energy
Andrew Maxwell Associate Professor	Mechanical Engineering	YES	Technology entrepreneurship and new venture	Technology commercialization	New product development
Sushanta Mitra, Professor	Mechanical Engineering	YES	Microfluidics	Porous Media	Bio-systems
Pouya Rezai, Assistant Professor	Mechanical Engineering	YES	Microfluidics	Point-of-Care Diagnostics and Detection	Organisms-on-a-Chip
Nima Tabatabaei, Assistant Professor	Mechanical Engineering	YES	Biomedical Optics	Thermo-Photonics	Diffusion-Wave Fields
George Zhu Professor	Earth & Space Science Engineering	YES	Dynamics	Solid Mechanics	Robotics and Control
Associate Members					
Members Emeriti					
Adjunct Members					
Jacob Abkarian	Mechanical Engineering	YES	Control system	Robotics	Technology commercialization
Roderick Guthrie	Mechanical Engineering	YES	System design	Fluid dynamics	Metallurgical processes
Yadollah Maham	Mechanical Engineering	YES	Thermodynamics	Thermal systems	Chemical processes
Instructor Members					

Full Members hold a tenure-track/tenured position at York University. They are eligible for the full range of teaching, examination and supervisory activities, including principal supervision doctoral dissertations.

Associate Members hold a tenure-track/tenured or contractually limited position at York University. They may be eligible for the full range of teaching, examination and supervisory activities, excluding principal supervision doctoral dissertations. They may serve as a co-supervisor of doctoral dissertations on the condition that the other co-supervisor is a full member of the graduate program.

Members Emeriti may be eligible to act as co-supervisor of doctoral dissertations and as the principal or as a co-supervisor of master's theses; may serve on supervisory and examining committees, and; may teach graduate course courses (including supervision of Major Research Papers/Projects).

Adjunct Members hold academic or professional positions external to York University, but whose academic and/or professional expertise is relevant to the graduate program in question. Adjunct members may be eligible to serve on supervisory committees but normally may not act as principal supervisor or co-supervisor of doctoral dissertations or master's theses. Adjunct members may be eligible to serve on examining committees but may not act as the Chair or Dean's representative.

Instructor Members are eligible to teach a specific graduate course or courses, based on program need and the members' academic and/or professional expertise. The appointment is coincident with the terms over which the graduate course(s) is/are taught.

Primary Graduate Program: An individual may be appointed to more than one graduate program, in which event they shall designate one of the programs as their primary graduate program. Although this designation is intended to signify an individual's principal, but not exclusive, commitment in relation to graduate supervision, teaching and service, a faculty member may shift their principal commitments over the course of their career.

Table 2 – Graduate Supervision

For graduate programs: Identify the supervisorships of master’s major research papers/projects (MRP), master’s theses, doctoral dissertations, and post-doctoral students (PDF) by each faculty member who will be appointed to the proposed program completed within the past eight years and currently in progress.

Faculty Member	Completed (within past eight years)				In Progress			
	MRP	Thesis	Dissertation	PDF	MRP	Thesis	Dissertation	PDF
Full Members								
Alidad Amirfazli	9	9	6	1	1	3	1	2
Alex Czekanski						1		
Siu N. (Sunny) Leung						2	1	1
Sushanta Mitra		25	7	5		2	3	1
Pouya Rezai						4	1	
Nima Tabatabaei						1	2	
Andrew Maxwell								
George Zhu	2	4	1	6		3	5	2
Associate Members								
Members Emeriti								
Adjunct Members								
Jacob Abkarian								
Roderick Guthrie	1		2		2		3	4
Yadollah Maham								

Table 3 – Research Funding Received by Faculty

For graduate programs: Identify the research funding received for each of the past eight years by members who will be appointed to the proposed program. This table is intended to show the amount of funding available to support faculty research and potentially available to support students' work, either through the provision of stipends or materials for the conduct of the research. For this reason, grants for travel and publication awarded to faculty should not be included in this table. Major equipment grants, which provide important resources for the work of faculty and students, may be listed separately.

Year	Source			
	Tri-Council	Other Peer Adjudicated	Contracts	Institutional
2014	645,000	242,500		400,000
2013	1,558,393	28,750		50,000
2012	1,969,123	100,000		
2011	972,423			
2010	241,400	301,652		
2009	155,000	342,400		
2008	171,400	50,000		
2007	233,316	95,000		

8. Enrolment Projections

8.1 Indicate the anticipated implementation date (i.e. year and term of initial in-take), and provide details regarding the anticipated yearly in-take and projected steady-state enrolment target, including when steady-state will be achieved.

The program start date is September 2015 with an intake of 21 students. The program intake will increase to 48 by 2019. The program will reach the steady state at the beginning of academic year 2019/20 when most of the hiring of all Mechanical Engineering department faculty members will be completed. The projections for the number of students enrolled in the program are based on the assumption that each faculty member in the Mechanical Engineering department will be supervising/co-supervising a minimum of 3-4 graduate students, with at least 1 Ph.D. student being supervised by the faculty member.

Table 8.1.1 MSc annual intake and FTE (heads) targets in Mechanical Engineering

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023
Annual Intake	11	15	16	18	18	20	20	21	23
FTE	11	23	28	31	33	34	37	40	42
Attrition	0	3	3	3	3	4	4	4	4

Table 8.1.2 PhD annual intake and FTE (heads) targets in Mechanical Engineering

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023
Annual Intake	10	13	15	16	16	16	16	16	16
FTE	10	22	37	31	31	34	36	37	37
Attrition	0	1	1	1	2	2	2	3	3
Extended Degree Completion	0	0	0	0	3	4	4	4	5

9. Support Statements

Support statements are required from:

- relevant Dean(s)/Principal, with respect to the adequacy of existing human (administrative and faculty), physical and financial resources necessary to support the program, as well as the commitment to any plans for new/additional resources necessary to implement and/or sustain the program
- Vice-President Academic and Provost, with respect to the adequacy of existing human (administrative and faculty), physical and financial resources necessary to support the program, as well as the commitment to any plans for new/additional resources necessary to implement and/or sustain the program
- University Librarian confirming the adequacy of library holdings and support
- University Registrar confirming the implementation schedule and any administrative arrangements
- relevant Faculties/units/programs confirming consultation on/support for the proposed program, as appropriate
- professional associations, government agencies or policy bodies with respect to the need/demand for the proposed program, as appropriate

New Program Proposals: Curricula Vitae of the Faculty

For new graduate programs, the Program Brief must include up-to-date CVs for all faculty members who will be appointed to the proposed program, as well as a copy of the program-specific appointment criteria. The program-specific appointment criteria must be developed in accordance with the Policy on Appointments to the Faculty of Graduate Studies. CVs must be submitted in a standardized format relevant to the proposed program, such as that used by one of the Tri-Councils (CIHR, NSERC, SSHRC) or the current OCGS format. The program proponents should agree upon the format prior to sending out a call to faculty members.

Although they are part of the Program Brief, CVs should be submitted *as an independent document*. Within this document, the CVs should be compiled in alphabetical order, with a table of contents. Where appropriate, a program may have separate sections for faculty members who hold full-time (including CLAs) positions at York, retirees, and adjunct appointments. The program-specific appointment criteria should be included in the document as an appendix.

An electronic or soft copy of the CV document in the format describe above should be submitted to the Office of the Vice Provost Academic at the same time as the proposal and external reviewer nominations. At the same time, a copy of the CV document should be submitted to the Office of Dean, Faculty of Graduate Studies, along with any other documentation necessary with respect to the formal appointment to the Faculty of Graduate Studies of those individuals who will participate in the offering of the proposed program.

Appendix A - List of Graduate Courses for Calendar

Appendix B – Graduate Seminar Series

Appendix C – Examination Requirements for M.A.Sc. and Ph.D. programs

Appendix D – Progress Report

Appendix E – New Course Proposals

Appendix F – Program Requirements for Mechanical Engineering Graduate Program

Appendix G – Support Letters

Appendix A - List of Graduate Courses for Calendar

Core Mechanical Engineering Graduate Courses (for credit):

Program: Mechanical Engineering

Course Number: MECH6101

Credit Value: 3.0

Long Course Title: Microfluidics and Nanofluidics

Short Course Title: Microfluidics and Nanofluidics

Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Low Reynolds number fluid dynamics; liquid and gas flows; surface tension, wetting and capillarity; thermal effects; lubrication theory; experimental methods; biofunctionalization; fabrication techniques; fluids in nanochannels

Pre-requisites: Consent of the Instructor

Program: Mechanical Engineering

Course Number: MECH6102

Credit Value: 3.0

Long Course Title: Interfacial Phenomena

Short Course Title: Interfacial Phenomena

Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: Interfacial thermodynamic principles; equilibrium conditions; contact angles; capillarity and wetting; surface forces and tension; drop-surface interactions; introduction to fluid mechanics involving interfaces; interfacial measurement techniques; special topics on applications

Pre-requisites: MECH 2201, 3202, or consent of the Instructor

Program: Mechanical Engineering
Course Number: MECH6103
Credit Value: 3.0
Long Course Title: Convective Heat Transfer
Short Course Title: Convective Heat Transfer
Effective Session: Fall 2016

Calendar (Short) Course Description (<60 words):

Topics include: Governing conservation equations; examples of formulation and solution; laminar boundary layer; integral method; turbulent heat transfer

Pre-requisites: MECH2201, MEC2202, MECH3202; and MECH3203 (or equivalent)

Program: Mechanical Engineering
Course Number: MECH6201
Credit Value: 3.0
Long Course Title: Advanced Continuum Mechanics
Short Course Title: Advanced Continuum Mechanics
Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: Indicical notation and tensor calculus; kinematics of a continuum: material and spatial descriptions, infinitesimal strain and rotation tensors, Lagrangian and Eulerian strain tensors, etc.; conservation laws; isotropic and anisotropic linearly elastic solids under small normal, torsional and bending deformations; Newtonian viscous fluids: properties interpretation, Navier-Stokes equation, analysis of special cases, etc.

Pre-requisites: MECH2301, 2302, 2503, 3202, 3501, 3502

Program: Mechanical Engineering

Course Number: MECH 6202

Credit Value: 3.0

Long Course Title: Advanced Dynamics

Short Course Title: Advanced Dynamics

Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: Dynamic system; rigid body kinematics; rigid body kinetics; D'Alembert principle; Lagrange's Equation; variational principle, Hamilton's principle; Hamilton-Jacobi theory; stability of dynamic systems; applications to a variety of engineering problems.

Pre-requisites: MECH 2302, 3501 and MATH 2270 (or equivalent)

Course Number: MECH6301

Credit Value: 3.0

Long Course Title: The Finite Element Method in Engineering Analysis

Short Course Title: Finite Element Method

Effective Session: Winter 2016

Calendar (Short) Course Description (<60 words):

Topics include: variational formulations and approximation for continuous systems; stiffness matrix formulations of truss and beam elements; isoparametric finite elements and application to 2D & 3D elements; shell elements; static and dynamic analyses; steady state thermal analysis (conduction only); mass matrix formulations; vibration eigen value problems; solvers to static and vibration analyses; verification and validation in finite element procedures.

Pre-requisites: CSE 1011, MECH 2301, MECH 4402

Program: Mechanical Engineering
Course Number: MECH6401
Credit Value: 3.0
Long Course Title: Design and Fabrication of Polymer Composites and Nanocomposites
Short Course Title: Composites and Nanocomposites
Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: advantages and problems of heterogeneous materials; structure, processing, and properties of composites and nanocomposites; material selections for filler, matrix, and additives; testing and properties of composites and nanocomposites; processing technologies of composites and nanocomposites; applications of composites and nanocomposites in traditional (e.g., automotive and aerospace) and emerging areas (e.g., biomedical and energy).

Pre-requisites: MECH2301 and 3502 (or equivalent)

Program: Mechanical Engineering
Course Number: MECH6402
Credit Value: 3.0
Long Course Title: Smart and Multifunctional Materials
Short Course Title: Smart and Multifunctional Materials
Effective Session: Fall 2016

Calendar (Short) Course Description (<60 words):

Topics include: Shape memory materials; electrically activated materials; magnetically activated materials; optically activated materials; chemically activated materials; structure, processing and properties of smart materials; research, development, and applications of smart materials.

Pre-requisites: Consent of the Instructor

Program: Mechanical Engineering
Course Number: MECH6501
Credit Value: 3.0
Long Course Title: Advanced Engineering Mathematics
Short Course Title: Advanced Engineering Mathematics
Effective Session: Winter 2016

Calendar (Short) Course Description (<60 words):

Topics include: matrices; review of ordinary differential equations; solutions to systems of simultaneous linear differential equations, Laplace transform, and eigenvalue methods; formulation of partial differential equations for engineering problems; solution to partial differential equations using the separation of variables, Sturm–Liouville theory, finite and infinite Fourier and Hankel transforms; variational calculus. Examples include Laplace, heat, Navier–Stokes equations, etc.

Pre-requisites: MATH 2270 (or equivalent)

Compulsory Graduate Courses (not for credit):

Program: Lassonde School of Engineering
Course Number: ENG 6000
Credit Value: 0.0
Long Course Title: Engineering Ethics
Short Course Title: Engineering Ethics
Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: Ethical responsibilities for engineering profession; academic and research integrity; technology impact on society; sustainable development and corporate citizenship; public health and safety.

Pre-requisites: None

Program: Mechanical Engineering
Course Number: MECH 6000
Credit Value: 0.0
Long Course Title: Graduate Seminar
Short Course Title: Graduate Seminar
Effective Session: Winter 2016

Calendar (Short) Course Description (<60 words):

Topics include: Research presentation event to develop and improve graduate students' presentation skills and techniques for their future career paths and to widen the scope of their knowledge by exposing them to research topics in other areas of Mechanical Engineering to establish a sense of community.

Pre-requisites: None

Program: Mechanical Engineering

Course Number: MECH 9001

Credit Value: 0.0

Long Course Title: MSc Thesis

Short Course Title: MSc Thesis

Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: students enrolled in performing research towards completion of the thesis requirement for MSc degree.

Pre-requisites: None

Program: Mechanical Engineering

Course Number: MECH 9002

Credit Value: 0.0

Long Course Title: Ph.D. Thesis

Short Course Title: Ph.D. Thesis

Effective Session: Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: students enrolled in performing research towards completion of the thesis requirement for Ph.D. degree.

Pre-requisites: None

Complementary Education and Training Courses (for credit):

Program:	Lassonde School of Engineering
Course Number:	ENG 6001
Credit Value:	3.0
Long Course Title:	Legal Aspects and Governance in Engineering
Short Course Title:	Legal Aspects and Governance in Engineering
Effective Session:	Fall 2015

Calendar (Short) Course Description (<60 words):

Topics include: intellectual property; insurance, directors' liability, and business associations law; international/transnational governance; environmental law and basics of contract law.

Pre-requisites: None

Program:	Schulich Business School
Course Number:	ENTR 6xxx
Credit Value:	3.0
Long Course Title:	Entrepreneurship and Technology Ventures
Short Course Title:	Entrepreneurship and Technology Ventures
Effective Session:	Winter 2016

Calendar (Short) Course Description (<60 words):

Topics include: This course provides the student with an understanding of the challenges and opportunities facing an entrepreneur in the process of creating a technology-based business. By developing a cohesive and effective business plan for such venture, students are expected to turn an idea into an enterprise, engaging potential customers and revisiting the plan to focus on what customers really want.

Pre-requisites: None

Program: Education
Course Number: EDUC 5414
Credit Value: 3.0
Long Course Title: Teaching and Learning in PSE, a study of traditional and emerging pedagogies including lectures, online learning, adult learning and student centred teaching
Short Course Title: Teaching and Learning in post secondary education
Effective Session: Winter 2016

Calendar (Short) Course Description (<60 words):

Topics include: This course examines traditional and emerging approaches to teaching and learning in post-secondary education. It explores the development of teaching methodologies in colleges and universities in Canada and other international venues. In particular students are encouraged to critically evaluate traditional methods and explore one or more selected methodology in the form of a review, group presentation and reflective paper.

Pre-requisites: None

Program: Lassonde School of Engineering
Course Number: ENG 6002
Credit Value: 3.0
Long Course Title: The Arts and Sciences of Scholarly Writing
Short Course Title: The Arts and Sciences of Scholarly Writing
Effective Session: Winter 2016

Calendar (Short) Course Description (<60 words):

Topics include: General aspects and rhetoric of scholarly writing; presentation of research findings; writing for readers with varying levels of technical knowledge; resources for finding out about funding opportunities; characteristics of successful and unsuccessful grant proposals; review and critique proposals of your peers.

Pre-requisites: None

Appendix B - Graduate Seminar Series

The Graduate Seminar Series is a single-day research presentation event that is conducted twice annually (in June and December) at the Department of Mechanical Engineering. Participation in this event is required for all graduate students and counts towards fulfilment of their degree requirements as a non-credit course MECH 6000 at York University. The main purposes of this event is to develop and improve graduate students' presentation skills and techniques for their future career paths and to widen the scope of their knowledge by exposing them to research topics in other areas of Mechanical Engineering to establish a sense of community.

- 1- **Administration:** This event will be planned by the Graduate Program Director (GPD) and the administration staff of the Department of Mechanical Engineering and conducted by the faculty members of the department who will chair the presentation sessions throughout the day. The Graduate Seminar Series starts at 9AM and ends at 5PM. The presentation sessions are 1hr in length (three presentations per session) and the chairs of the sessions are assigned by the GPD.
- 2- **Participation:** All M.A.Sc. and Ph.D. students registered full-time at the Department of Mechanical Engineering are required to participate in this event in full. Full participation consists of successfully satisfying all the requirements listed below:
 - a) Every year, each M.A.Sc. and Ph.D. student is required to deliver a 15min research-related presentation followed by a 5min question and answer session at the Graduate Seminar Series. Students whose final thesis/dissertation defense is scheduled before September 1st or who joined the program after January 1st of the same year are exempted from presenting but still required to attend the event in full.
 - b) Presenters should work with their supervisors to prepare and submit a Student Activity Report (maximum of 10-page) to their designated supervisory committee members at least 5 days before the Graduate Seminar Series event. Previous-year coursework and research progress as well as the future plan, published journal and conference papers, and leadership and entrepreneurship activities should be discussed clearly in this report.
 - c) The Graduate Seminar Series provides the students with an opportunity to rehearse their presentation and improve it for a subsequent Supervisory Committee meeting that has to be planned and conducted within one month of completion of the Graduate Seminar Day for all Ph.D. students.
 - d) Attendance will be taken at each session by the chairs. A minimum of 80% attendance throughout the day is required to pass. If for any reason a student is not able to attend some sessions or the entire event, one should contact the GPD and the chair of the session well ahead of time and schedule alternate session (either June or December).
- 3- **Organization and Evaluation:** Before the Graduate Seminar Series day, the chair of each session will be responsible for collection of Student Activity Reports and selection of two faculty members (either the Supervisory Committee members or other professors

from any department at York University) and one Mechanical Engineering graduate student who will act as referees of their sessions. On the Graduate Seminar day, the chairs will run the sessions and provide the referees with evaluation forms (provided by GPD) that have to be filled and submitted to the chair by the end of each session. Other graduate students will also receive an evaluation form to provide feedback to each presenter. The referees and graduate students can nominate their preferred presentations for the best presenter award on the evaluation form. The chairs are responsible for collection of all evaluation forms and submitting them to the Mechanical Engineering Graduate Program office. The evaluation forms will be assessed by an award committee (established by the GPD) to select the best Mechanical Engineering Graduate Seminar Presenter.

Preparing a presentation

Please keep the tips and recommendations below in mind when preparing your presentation and or attending the Graduate Seminar Series:

- 1- Your audiences are perhaps interested in your work and have an academic background, but they are not necessarily experts in your field of research. So keep your presentation level at a stage that is understandable to this audience. This is of particular importance to Ph.D. students who will have dissertation examiners and judges with minimal or even no knowledge of their topics at all.
- 2- Keep the timing of your presentation strictly to 15 minutes. Many details can be discussed in the 5min Q and A session that follows each presentation if the audience is interested.
- 3- Use a maximum slide numbers of 15 and a minimum font size of 18. Review your slides with your supervisor and rehearse with your fellow graduate students. Present in a loud and clear voice and face the audience when delivering your presentation.
- 4- Your presentation should preferably include the sections below:
 - a) *Project*: Description of the research project, current knowledge and practice and expected contributions
 - b) *Investigation*: Phenomenon under investigation, experimental setups / numerical analysis, accuracy, precision, errors, etc.
 - c) *Analysis*: Procedures and results, their accuracy and conclusions drawn
 - d) *Conclusion*: Dissemination of the research results and the expected impact

Appendix C - Examination Requirements for M.A.Sc. and Ph.D. Programs

The oral examinations for both Master's candidates and Doctoral candidates are in accordance to the guidelines specified by the Faculty of Graduate Studies at York University. The details are stated in: http://www.yorku.ca/grads/policies_procedures/thesis_dissertations_section4.html.

1. Master's Thesis & Examination

All candidates, after the formal submission of the thesis, will participate in an oral examination, centred on the thesis-research.

1.1. Master's Thesis Exam Committees

A thesis examining committee shall consist of at least three voting members, including the Chair, as follows:

- a. two graduate faculty members chosen from the Department of Mechanical Engineering at the Lassonde School of Engineering, one of whom will serve as Chair of the examining committee;
- b. one graduate faculty member at arm's length from the supervisor, and normally from outside the Department of Mechanical Engineering at the Lassonde School of Engineering.

1.2. Scheduling of Master's Thesis Oral Exams

Oral examinations for master's theses shall be held normally no less than three weeks from the date on which copies of the completed thesis approved by the supervisor are sent to each member of the examining committee.

1.3. Master's Thesis Oral Exam Evaluation

In accordance with the evaluation guidelines specified by the Faculty of Graduate Studies, the committee should reach one of the following four decisions for the Oral Examination:

- a. *Accepted with No Revision*
- b. *Accepted Pending Specified Revisions*: Specified revisions must be completed within six months of the date of the oral exam.
- c. *Referred Pending Major Revisions*: The committee will agree on (a) reconvene within twelve months to continue the oral examination; or (b) circulate the revised thesis within twelve months to all members to decide if the stipulated requirements have been met.
- d. *Failed*

2. Doctoral Dissertation & Examination

All candidates, after the formal submission of the dissertation, will participate in an oral examination, centred on the dissertation-research.

2.1. Doctoral Dissertation Exam Committees

A dissertation examining committee will have the following composition, with at least four voting members:

- a. The Dean of the Faculty of Graduate Studies or her/his representative, who will be at arm's length from the supervision of the dissertation, and who will serve as Chair of the examining committee and will be a non-voting member;
- b. One external examiner, from outside York University, at arm's length from the dissertation, recommended by the graduate program director (voting member);
- c. one graduate faculty member at arm's length from the dissertation, and normally from outside the Department of Mechanical Engineering at the Lassonde School of Engineering, recommended by the graduate program director (voting member);
- d. two graduate faculty members from the supervisory committee, or one member from the supervisory committee and one graduate faculty member from the Department of Mechanical Engineering at the Lassonde School of Engineering (voting members).

2.2. Scheduling of Doctoral Dissertation Oral Exams

Oral examinations for doctoral dissertations shall be held normally no less than three weeks from the date on which copies of the completed dissertation approved by the supervisory committee are sent to each member of the examining committee. The oral exam may be held less than three weeks from the time copies are sent to the examining committee provided all parties agree.

2.3. Doctoral Dissertation Oral Exam Evaluation

In accordance with the evaluation guidelines specified by the Faculty of Graduate Studies, the committee should reach one of the following four decisions for the Oral Examination:

- a. *Accepted with No Revision*
- b. *Accepted Pending Specified Revisions*: Specified revisions must be completed within six months of the date of the oral exam.
- c. *Referred Pending Major Revisions*: The committee will agree on (a) reconvene within twelve months to continue the oral examination; or (b) circulate the revised thesis within twelve months to all members to decide if the stipulated requirements have been met.
- d. *Failed*

Under special circumstances, if no agreement is achieved by the voting members of the examination committee on the outcome of the oral examination, then the Chair of the examining committee will arrive to a conclusive decision through a consultation process within a week's time.

3. Doctoral Comprehensive Examination

All candidates enrolled in the Ph.D. program in Mechanical Engineering need to take the doctoral comprehensive examination. It is encouraged that the student takes this examination as early as possible in consultation with the supervisory committee. The exam should be taken within 12 to 16 months after the student starts the Ph.D. program.

The purpose of this comprehensive examination is two folds: (a) to assess the student's fundamental knowledge in mechanical engineering and of the subject matter relevant to the thesis; (b) to assess the student's ability to conduct independent research of highest quality.

The students need to prepare a short report outlining their research work conducted, proposed research plan and timeline for completion of their degree requirements. The students need to present this report in front of the doctoral comprehensive examination committee. This is an open presentation, typically for 15 – 20 mins followed by question and answer period from the audience attending the presentation part of the examination. It will be followed by a closed-door oral examination by the examination committee members. Typically, the first round of questions will assess the student's fundamental knowledge in the discipline. The second and subsequent round of questions will be towards assessing student's understanding of the research topic presented during the part of this examination process.

3.1. Doctoral Comprehensive Exam Committees

A comprehensive examining committee shall consist of at least three voting members, including the Chair, as follows:

- a. One examiner, from the Lassonde School of Engineering, at arm's length from the supervisor and who will serve as Chair of the examining committee;
- b. two graduate faculty members from the supervisory committee

3.2. Scheduling of Doctoral Comprehensive Exams

Examination shall be held normally no less than three weeks from the date on which copies of the short report are sent to each member of the examining committee. The oral exam may be held less than three weeks from the time copies are sent to the examining committee provided all parties agree.

3.3. Doctoral Comprehensive Exam Evaluation

The committee should decide on the following two criteria:

- (i) Whether the student possesses adequate knowledge of the discipline and of the subject matter relevant to the thesis
- (ii) Whether the student is able to perform independent research at highest level as expected from a doctoral student.

Based on above two criteria, the committee should reach one of the following three decisions for the Comprehensive Examination

- a. *Pass*
- b. *Conditional Pass*: Provide specific details in terms of deficiencies of the student, clear direction in terms of the conditions and the time frame under which the conditions to be met by the student.
- c. *Fail*: The committee will agree on (a) reconvene within six months to conduct the re-examination; or (b) recommend change of category to a Master's program; or (c) termination of the doctoral program.

Appendix D – Progress Report

Every student enrolled in the graduate program need to complete the Progress Report, at least 5 days before the scheduled Graduate Seminar Series event in a given academic calendar. This report needs to be submitted to the Graduate Program Director.

PART A - BASIC INFORMATION

1. STUDENT INFORMATION

Student's Name: _____ ID #: _____ Degree: _____

Number of terms completed in program (do not include the current term): _____

Research Area or Expected Thesis Title:

2. SUPERVISOR(S) AND SUPERVISORY INFORMATION

Supervisor: _____ Co-Supervisor: _____

Supervisory Committee (For PhD students this is mandatory after their first year, optional for MSc students)

Committee Member: _____

Committee Member: _____

Committee Member: _____

Date of last Supervisory Committee Meeting (Must meet at least once a year) :

3. ETHICS TRAINING COURSE (Ethics training is mandatory for all graduate students)

ENG 6000: Date completed _____

PART B – ACADEMIC PROGRESS

1. COURSE WORK - please list course numbers / grades

1. _____/____ 2. _____/____ 3. _____/____
 4. _____/____ 5. _____/____ 6. _____/____
 7. _____/____ 8. _____/____ 9. _____/____

a. Are your program course requirement completed? YES _____ NO _____

2. SUMMARY OF RESEARCH PROGRESS (150 word maximum)

-
-
-
-
-
-

3. ACADEMIC ACHIEVEMENTS

a. **Publications** - Journal Paper/Conference/Book Chapter/Patents/ Reports of Invention/ Technical Reports (For publications, add entries in the term submitted, then subsequently updated status)

Reference – Format: Authors (year). Title. Venue. Volume, Page Numbers or # Manuscript Pages	Status *	Date of last status change
1)		
2)		
3)		

* Status: Under Review (UR), Accepted (A), In Press (IP), Published (P) or rejected(R)

b. Presentations

Reference – Format: Authors (year). Title. Venue. Date	Presenter
1)	
2)	
3)	

c. Other Academic Achievements (e.g., scholarship, award, etc)

-
-
-

4. TEACHING

- a. Principal Instructor
 - i. Course Number _____
 - ii. Course Number _____
- b. Guest Lecturer
 - i. Course Number _____
 - ii. Course Number _____
- c. Teaching Assistant
 - i. Course Number _____
 - ii. Course Number _____
- d. Marker
 - i. Course Number _____
 - ii. Course Number _____
- e. Did you attend the Record of Completion Certificate? _____ . If so, indicate whether it is for Junior or Senior Certificate.

5. OBJECTIVES FOR THE CURRENT TERM (150 word maximum) - Briefly describe your proposed research (objectives, methodology) for the next academic year

-
-
-
-
-
-

Signature: _____ Date: _____

PART C - SUPERVISOR'S EVALUATION

Please review the stated progress of the student and then, in the box below, please comment on his/her progress, contribution to publications and proposed research and return to Graduate Program Director.

Student's Name: _____ Student ID#: _____

Please rate this student's performance as (circle one):

Excellent Very Good Good Needs Improvement

SUPERVISOR(S)

_____ DATE: _____

_____ DATE: _____

Appendix F - Program Requirements for Mechanical Engineering Graduate Program

The graduate program in Mechanical Engineering offers courses and opportunities for advanced studies and research leading to the degrees of Master of Applied Science (M.A.Sc) and Doctor of Philosophy (Ph.D.) in Mechanical Engineering. While the general guidelines for program requirements are listed below, specific details are found in the document *Program Manual for Graduate Study in Mechanical Engineering*, available online from the Department website along with details regarding current active research areas in the Department.

Master of Applied Science Program ADMISSION REQUIREMENTS

Graduates with an honours undergraduate degree or equivalent (typically a four-year program with full-time enrolment) from an accredited university, with at least a B average in the last two years of study, may be admitted as candidates for the Master of Applied Science program in mechanical engineering. The following are the minimum English Language test scores (if required): TOEFL 233/577 or YELT 4.

DEGREE REQUIREMENTS

Candidates for the M.A.Sc degree in mechanical engineering must complete four graduate three-credit courses, two compulsory non-credit courses (ENG 6000 Engineering Ethics and MECH 6000 Graduate Seminar Series), and write and successfully defend a master's thesis.

TIME REQUIREMENTS

Students are expected to complete all of their master's degree requirements in no more than 12 terms (4 years) of registration as a full-time or part-time Master's student, in accordance with Faculty of Graduate Studies Registration Policies, including the requirement of continuous registration.

Doctor of Philosophy Program

ADMISSION REQUIREMENTS

Applicants must have a graduate degree (M.A.Sc or equivalent) from relevant Engineering programs (e.g., Mechanical Engineering, Material Engineering, Electrical Engineering) or Sciences programs (e.g., Physics, Chemistry, Biology). A minimum average grade of B on all course work is required. Outstanding applicants with undergraduate degree in mechanical engineering will also be considered for direct admission to Ph.D. program in Mechanical Engineering. The following are the minimum English Language test scores (if required): TOEFL 233/577 or YELT 4.

DEGREE REQUIREMENTS

Candidates for the Ph.D. degree in mechanical engineering must complete four graduate three-credit courses, two compulsory non-credit courses (ENG 6000 Engineering Ethics and MECH 6000 Graduate Seminar Series), and write and successfully defend a doctoral thesis. Candidates who do not have a master's degree would require to take two additional graduate three-credit courses. Candidates must successfully complete a

Ph.D. comprehensive examination consisting of a written report on the candidate's field of interest and have an oral defense of the report.

TIME REQUIREMENTS

Students are expected to complete all of their doctoral degree requirements in no more than 12 terms (4 years) of registration as a full-time or part-time Master's student, in accordance with Faculty of Graduate Studies Registration Policies, including the requirement of continuous registration.

YORK UNIVERSITY

New Program Brief

**Bachelor of Arts (Honours)
in
Educational Studies**

(February, 2015)

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1. INTRODUCTION

In 0.26 seconds Google can provide over 11 billion hits for the word “education.” In fractionally more time (0.32 seconds), Google Books provides a mere 468 million hits and Google scholar a comparatively tiny 4.5 million hits. Education is now part of the discourse and work of health, environmental agencies, cultural institutions, community organizations, businesses and governments. The OECD has a variety of education initiatives targeted not just at the school years but beyond those years¹. Nations’ productivity is associated with education. Business and labor sectors identify the importance of continuous education². Yet, because of the popular association of education with schooling, apart from some general adult education programs, few post-secondary undergraduate programs exist in the field of education other than those dedicated to preparing teachers for Kindergarten to Grade 12 schooling. As knowledge becomes a global currency, education is seen as the world’s conduit to that currency. The proposed program in Educational Studies draws upon theory and research in education to provide a foundation in education for those offering educational services outside of contexts requiring teacher-certification. Examples of sectors are: cultural institutions such as museums, art galleries and nature conservancies; non-governmental agencies involved in a wide array of service provision; recreational services; community organizations; and businesses.

The overall plan for the proposed program in Educational Studies is to offer multiple pathways towards the study of education—through a degree with a major in educational studies, through a minor in educational studies, and through an articulated agreement with Seneca College which will create a degree pathway for those involved in the human services sector. Multiple pathways are responsive to the diverse needs of potential students and this approach to degree development is in keeping with the social justice program focus for which the Faculty of Education has become known. The proposed program will provide layered opportunities for students to engage in a variety of educational services contexts either by simply experiencing an educational services context, collaborating with others in the setting in the provision of educational services, or inquiring (focusing upon a research question) about an identified topic in relation to the context. The proposed program is unique in Ontario. This proposal allows for a major or minor in Educational Studies for a Bachelor of Arts (honours).

1.1 The Proposed Program

The degree program being proposed is a Bachelor of Arts (honours) in the field of Educational Studies with core components and electives. The degree program would be available to students completing high school with a minimum of OSSD or equivalent. The program would also be available

¹ The OECD now has developed an OECD GPS which profiles a variety of aspects of education in countries across the world. URL: <http://www.oecd.org/education/>

² See, Canadian Federation of Independent Business. (2009). *Canada’s training ground ‘SMEs’ \$18 billion investment in the national workforce*. Toronto, ON: Canadian Federation of Independent Business. URL: <http://www.cfib-fcei.ca/english/article/368-canada-s-training-ground.html>

as a minor field to Bachelor of Arts students in other fields. For instance, students with interests in social sciences and humanities fields who would like to frame their studies with an educational services component would benefit from a double major or a minor option. As the program grows in size, unique concentrations within the program may emerge and the program can be adapted to provide studies in these concentrations. The program includes an experiential component which relies on partnerships with external business and community stakeholders.

The program has three areas of focus: *engagements*—concentrated upon developing professional skills in education, *values*—concentrated upon understanding why we educate and who we educate; and *representations*—understanding the idea of education, and how education is represented within and across cultures. In short, the program is focused both upon education as an area for academic study and upon the provision of educational services as an employment activity that could flow from such study.

Complementing these three areas of study is the situation of learning experiences in real world contexts through Experience, Inquire, Contribute (EIC) credits. These credits are an innovative part of the program that allow students to engage in educational services contexts in relation to coursework at one of three levels of participation—simply by experiencing the context of educational services provision, by collaborating with others for the provision of educational services at a site, or by inquiring into the provision of educational services. A portion of these EIC credits is dedicated towards a capstone experience for the degree. The program is also innovative in that it is not restricted to the provisioning of adult education but is broad enough to include the education of in contexts where teacher certification is not required (eg., cultural, recreational, community contexts).

1.2 Proposal Development

Discussions for exploring options for development of programs in the Faculty of Education were held initially in a series of informal meetings held with different groups of faculty members in December 2011 and January 2012 that were led by the Dean of the faculty. The outcome of these meetings was summarized in a Discussion Paper that was circulated to faculty in February, 2012. This Discussion Paper identified the development of a new undergraduate degree as an area of potential growth. A Faculty Retreat was held on May 7, 2012. Minutes of this meeting recommended that the faculty pursue the development of creating "majors and minors with other Faculties" and "a Bachelor of Education Studies." In January 2013, the Dean advised Faculty Council that development work on the Bachelor of Arts would be undertaken.

The proposal itself was developed through a recursive process involving faculty consultation led by a small working group. A graduate student conducted a review of undergraduate programs at other universities. The working group examined the registry of courses at York University to determine whether there would be courses or programs that would complement a possible degree. Faculty members at large were kept apprised of the work of the working group through video-podcasts and e-mail postings. Faculty members teaching elective courses in the B.Ed. program were asked to

identify whether the courses they taught were appropriate to a BA in Educational Studies and a subset of elective courses was identified for inclusion in the BA in Educational Studies. In some instances minor modifications were made (e.g., replacing the word “teacher candidates” with “students”). In addition, faculty members were polled to assess topics they saw as relevant to the degree. The working group thematically clustered the topics into possible course titles, proposed short descriptions and then made an open call for volunteers to write short calendar descriptions for the topics. These then formed the starting point for discussions with other faculties and units within the university. All deans were advised that the proposal was under development and an offer was extended to engage in consultation with any of their relevant units. Discussions were held with the Schulich School of Business, Social Work, School of the Arts, Media, Performance and Design, and several units within Liberal Arts & Professional Studies. In addition, the Faculty of Education was successful in receiving ONCAT funding to develop a degree pathway for human services fields at Seneca College. Full-length course proposals for new courses were developed over the summer of 2014 and the proposal brief was completed.

The program will be housed in the Faculty of Education.

2. GENERAL OBJECTIVES OF THE PROGRAM

2.1 Brief Description of the General Objectives of the Program

The proposed program aims to: (a) provide foundational knowledge and skills so that students will be able to understand and analyze education and its role in contemporary society, and (b) develop students’ skills to enable them to undertake educational work in non-teacher-certification contexts.

The program builds on the Faculty of Education’s strength in the study of education as a field, and on the university’s strength in the liberal arts and professional studies. It resonates with the university’s interests in collaborating with communities, experiential education, and social engagement in that the study of education is intensely concerned with the contexts in which learning occurs and the experiential component actively involves students in the work of education. This unique blend will position York University as a North American leader in the study of education.

Students in the program are expected to have opportunities to develop: a) knowledge of the ways in which education operates officially and unofficially in contemporary culture, b) the values that underpin different conceptions of education, and c) the strategies that can be used in the service of educational work. Our goal is to create individuals who not only understand the intrinsic qualities of education, but, also, understand that, even though education is a contested domain, it offers considerable instrumental potential towards life-changing trajectories for individuals, whether those potentials are realized in formal or informal educational contexts.

2.2 Relationship of the Proposal to Faculty and University Academic Plans

The proposed program resonates with the five year plan of the Faculty of Education. In that plan, the faculty intended to strengthen “our internal, pan-university, and external relationships”³ and develop “new ones that enrich and extend the teaching, learning and research capacities of the Faculty of Education.”⁴ As a program that has developed major and minor options for students wishing to study education in a wide variety of contexts, the proposed program fulfills these intentions. Additionally, the proposed program serves the University Academic Plan (UAP) in that it reflects a commitment to both “engagement and outreach”⁵ in its strong experiential and community-based orientation. In addition, the UAP’s goal of “supporting innovative and flexible curriculum delivery through online and hybrid courses” will be realized in that initial aims are for approximately one-third of the curriculum to be offered in a blended format.⁶ The program fulfills other objectives of the UAP in that it offers another route towards interdisciplinary study and extends the comprehensiveness of the university’s offerings; it builds on existing core strengths and, through the pathway for Seneca College students in human services sectors, will improve opportunities for college students applying to York. Additionally, the program is cited in the appendix to the University’s Strategic Mandate Agreement with the Ministry of Colleges, Training, and Universities as a proposed new degree offering.⁷

The program also builds on the Faculty of Education’s existing work in community education through the York Centre for Education and the Community (YCEC), a centre which is currently in the process of renewal. The YCEC is well placed to generate interest in the Bachelor of Arts (Educational Studies). The Centre has well-established community connections. For example, a cohort of community workers who recently completed a certificate program at YCEC see the Bachelor of Arts (Educational Studies) as an ideal next step in their academic careers.

³ *Faculty of Education Response to call for Five-Year Plan* (March, 2009)| Faculty of Education Council Agenda Appendix B, p. 1.

⁴ *Faculty of Education Response to call for Five-Year Plan* (March, 2009)| Faculty of Education Council Agenda Appendix B, p. 6.

⁵ Academic Policy, Planning and Research Committee, Senate of York University. (2010). *University Academic Plan 2010-2014: Enhancing Academic Quality in a Globalized World*, p. 7.

⁶ Academic Policy, Planning and Research Committee, Senate of York University. (2010). *University Academic Plan 2010-2014: Enhancing Academic Quality in a Globalized World*, p.9.

In the attached course outlines, there is a range of ways in the use of technology in delivery of courses is envisioned. Some courses are not at all on-line, but utilize media within the classroom; others are partially online, and other cases the possibility of being fully online is proposed. In keeping with current research (e.g., Means, B., Toyama, Y., Murphy, R.F., & Baki, M. [2013]. *The effectiveness of online and blended learning: A meta-analysis of the empirical literature. Teachers College Record*, 115 (3), 1-47), blended formats represent the typical approach in the use of technology for teaching.

In the service of enhancing its moves towards increasing its online pedagogical capabilities, the Faculty of Education recently hired an alternate stream faculty member (appointment effective January 2015) in the area of technological education. Part of this faculty member’s responsibilities will be to assist other faculty members with online pedagogy.

⁷ Appendix to the *Strategic Mandate Agreement for 2014-15 to 2016-17*, Submitted to the Ministry of Training, Colleges and Universities by York University, April 14, 2014. URL: <http://vpap.info.yorku.ca/files/2014/04/SMA-York-Final-Appendix-Long-Version-of-SMA-April-14-2014.pdf>.

In short, the proposed program exemplifies the spirit of the York University institutional vision⁸ to be a socially responsive engaged institution that has “a unique and defining excellence in both liberal arts and professional programs.”

3. NEED AND DEMAND

The need and demand for the BA (Educational Studies) must be situated in a context in which three factors are playing out simultaneously.

First, as noted above, there is the move towards the provision of education in a wide variety of contexts across the lifespan.

Secondly, the relationship between B.Ed. and the BA (Educational Studies) must be considered. For several years, there has been an oversupply of certified teachers in the province of Ontario.⁹ Some of these certified teachers are finding employment in sectors identified in the BA (Educational Studies); yet, their degrees have prepared them to teach the curriculum of Ontario schools rather than the sectors in which they find themselves employed. Not only that, despite the dismal employment market in the school system, and perhaps because teaching is often considered a vocation, the Faculty of Education continues to receive far more applications for the direct entry Concurrent B.Ed. than it has spaces. To illustrate the potential size of this group, the Faculty of Education receives some 2100 applications to the Concurrent B.Ed. program for approximately 175 spaces. Of those not accepted, about 900 students choose not to attend York even though they received admission offers from other faculties at York. We expect that the proposed program will be of interest to some of the current pool of applicants to the Faculty of Education’s direct entry Concurrent B.Ed. program who wish to teach and anticipate that their prospects of finding work in the school sector are limited while employment in other sectors seems to be growing. A Bachelor of Arts (Educational Studies) will meet the needs of these potential students.

Finally, there is also an emerging trend for professionals to pursue multiple degrees to leverage their position in the job market¹⁰ and the BA (Educational Studies) would be well suited to those wishing to incorporate an education component into their professional profile.

3.1 Similar programs

Within York University. Within York University, the Children’s Studies program within Humanities focuses upon children’s culture; however, it does not focus upon the provisioning of educational services. Discussions have been held with the Children’s Studies program and areas of overlap and distinction have been identified so that neither program should be compromised. Across the university, individual units offer a very limited number of courses that focus on education, principally in the social sciences and humanities areas. While these courses may serve as a

⁸ Shoukri, M. (Undated). *Institutional Vision, Proposed Mandate Statement and Priority Objectives: A Submission to Begin the Process of Developing Strategic Mandate Agreements*. York University.

⁹ MacDonald, M. (2011, Nov. 7). Way too many teachers. University Affairs.

¹⁰ Buck, G. (2014, September 25). Double and triple threats: When an extra degree pays off. *MacLeans Magazine*. URL: www.macleans.ca/education/university/double-and-triple-threats-when-an-extra-degree-pays-off/

complement to proposed program's offerings, they do not take the form of a concentration in any unit.

Within Canada. In general, within Canada, undergraduate education degrees tend to lead to teacher certification. Some notable exceptions are programs in adult education (e.g., Brock, New Brunswick); however, as the name suggests, these programs focus on the provisioning of educational services to adults in general. A program offered at UOIT called Educational Studies and Digital Technology has a high emphasis on technology with possible focuses in adult education and early childhood education; this program does not have the intense focus on the importance of community contexts as the proposed program does. Within Canada, Simon Fraser offers a General Studies degree in Education which is for the "non-specialist" educator; however, in examining the courses for the degree it appears that a number remain oriented towards a K to 12 type of setting. In essence, this proposal, with its intense focus on non-school contexts, is breaking new ground in Canada.

Within the United States. Within the United States, there is a wide range of ways in which education degrees are packaged and offered and in some jurisdictions education degrees are only offered at the graduate level. The term Educational Studies, when used, tends to refer to programs that focus on foundational studies in areas like philosophy or sociology, but there is no strict pattern as to its use. No program comparable to the one being proposed was found.

3.2 Need for the program

Because the proposed program is capturing an emerging field, much of the demonstration of need for the program is made through extrapolating patterns from within current data sets that are not oriented towards this specific field.

3.2.(i) Description of the General Need and Demand

The provision of educational services has been paired with a variety of societal activities. Table 1 presents the results of recent Scholar's Portal searches indicative of the kinds of activities undertaken and provides an indirect indication of general societal demand.

Table 1. Scholar's Portal Publications on Selected Search Terms		
Search Terms	Number of Publications	
	ERIC¹¹ Database	All SP Databases
Patient education	14,433	77,335
Recreational education or movement education (not elementary education; not secondary education)	23,529	1,097,481
Community education	191,199	2,531,260
Cultural education(not elementary education; not secondary education)	71,978	919,003
Second language education (not elementary education; not secondary education)	52,803	679,265
Outdoor education (not elementary education; not secondary education)	52,803	679,265
NGOs and education	707	119,380
Policy and education	145,988	2,893,125
Health education (not elementary education; not secondary education)	80,830	2,804,873
Business and education (not elementary education; not secondary education)	51,667	3,526,655
Museums and education (not elementary education; not secondary education)	2,780	305,390

In Britain, Educational Studies was introduced in the latter half of the twentieth century. There, Educational Studies was considered to be an area for study unto itself rather than an area of study dedicated to professional certification. The field as defined by the Quality Assurance Agency in Britain is described as follows:

Concerned with understanding how people develop and learn throughout their lives. It facilitates the study of the nature of knowledge, and a critical engagement with a variety of perspectives, and ways of knowing and understanding, drawn from a range of appropriate disciplines. [These programmes] all involve the intellectually rigorous study of educational processes, systems and approaches and the cultural, societal, political and historical contexts in which they are embedded.¹²

In Britain, in 2011, 813 undergraduate degree courses in Educational Studies were offered at 67 post-secondary institutions.¹³ This pattern of offering indicates that demand is high for the field of Educational Studies once it is introduced, although there is some variation in what is covered under the term.

The proposed program aligns well with the description provided by the Quality Assurance Agency but it is somewhat unique in that it has an added experiential component focused on the provisioning of educational services; in this respect the program is unique.

¹¹ Education Resources Information Clearinghouse.

¹² Davies, I., & Hogarth, S. (2004). Perceptions of educational studies. *Educational Studies*, 30 (4), 425-439.

¹³ Shaw, A.J. (2011). Deconstructing the student experience on an educational studies degree, with reference to student choice, access and outcomes. *Journal of Further and Higher Education*, 35 (4), 545-560.

Added to these patterns are indications of local interest in a degree of this nature. For example, in the developmental phase of degree preparation, consultations were made with about a dozen departments in the Faculty of Liberal Arts and Professional Studies. All those agreed that their students would be interested in pursuing either a minor or a double major. In fact, the idea for the development of the double major arose out of such consultations. The focus on Educational Studies was seen as complementing existing studies and adding value for those who wished to pursue this option. Indeed, in some areas, the consensus was that there would be very high interest from students. Similarly, students enrolled in a community education certificate program offered through the Faculty of Education's YCEC expressed considerable interest in pursuing a degree program in Educational Studies.

3.2. (ii) Employment Patterns

Patterns of employment in the educational services sector are difficult to capture because the provision of educational services is conflated with other occupational information. For example, Statistics Canada (2006) uses a broad category of "Occupations in social science, education, government service and religion" which has two subcategories: (a) Teachers and professors, and (b) Paralegals, social services workers and occupations in education and religion. In 2008 over 300,000 were employed in this latter sector. Missing from this classification are occupations which engage in education but which are not coded under Statistics Canada's code of "Occupations in social science, education, government and religion." More recent Statistics Canada data (2011-2012) for the Province of Quebec allow a somewhat more fine-grained picture to be extrapolated (as illustrated in Table 2 below).

<i>Employment Category</i>	<i>% Involved in Educational Services Provision</i>
Recreation, Sports and Fitness Program Supervisors and Consultants	11.7%
Biologists and Related Scientists	5.6%
Libraries	16.1%
Professional Occupations I Public Relations and Communications	5.6%
Dietitians	4.0%
Specialists in Human Resources	3.4%
Instructors and Teachers of Persons with Disabilities	74% ¹⁴
Library, Archive, Museum and Art Gallery Managers	6.1%

In addition, it should be noted that Human Resources and Skills Development Canada's 2011 Occupational Projection System forecasts a need for managers in health, education, social and

¹⁴ 74% provide educational services; 14.9% work in elementary and secondary schools, 47.1% work in other kinds of agencies, 5.7% work in colleges, and 7.3% in public administration)

community services, all areas that have an educational services component. If employment patterns in Britain for students graduating from Educational Studies programs are an indication, then employment rates for students graduating with majors in Educational Studies programs are quite respectable with about 2/3 of the graduates of these programs employed 6 months after their studies and about 90% of the graduates either employed, or studying, or both.

Within the Canadian context, several new terms are emerging oriented towards educational work in non-school contexts. For instance, the term *Educational Developer* is used by the web-employment bulletin board WOWJOBS, and *Learning Specialist* by Workopolis. One further indication of the burgeoning identity-formation of this field can be found in the fact that in 2011, The Learning Specialists Association of Canada¹⁵ was formed with a particular focus on, but not limited to, the provision of learning specialists within the context of post-secondary education.

3.2. (iii) Preparation for Graduate Studies

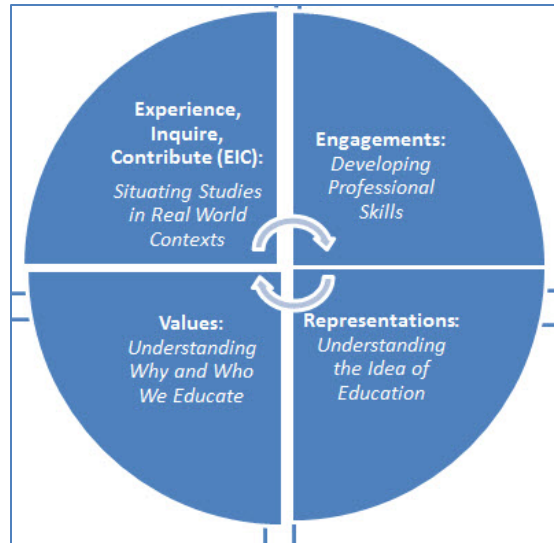
Students will graduate with an Honours Bachelor of Arts degree which will prepare them for graduate studies in a variety of fields, in particular within fields of education or related to the study of education. The Graduate Program in Education is in the process of developing a Professional Master's degree which will require one year of additional study.

4. PROGRAM CONTENT AND CURRICULUM

4.1 Program Requirements

As illustrated in Figure 1, the program includes an experiential component, the *Experience, Inquire, Contribute* (EIC) component, and course offerings clustered into three topical areas which foreground how the topic of education will be explored: *Engagements*—focused on the development of professional skills, *Values*—focused on who and why we educate, and *Representations*—focused on understanding the idea of education.

¹⁵ See, LSAC: Learning Specialists Association of Canada, URL: <http://www.learningspecialists.ca/>



Because the three curricular areas (engagements, values, and representations) are considered fundamental to an understanding of educational studies, students are required to take an equal number of courses from each of these three areas. In organizing the curriculum in this manner, students will have the opportunity not only to develop professional skills, but understandings of larger philosophical questions about education as an area of study and as a means of cultivating social aspirations, identities, and communities. The curricular design is deliberately recursive in that as students are enrolled in courses focused on developing engaging forms of education, they also will be involved in courses that address issues such as the role of contexts in relation to education and the values that come into play in formal and non-formal educational contexts. In the final two years of study, through EIC credits, students will complement their coursework with engagements in educational contexts either by being an active participant in a variety of contexts, developing and implementing an inquiry project in the contexts or being involved in some type of educational production (e.g., teaching, curriculum design, policy making) in the contexts.

Three routes of study are possible:

- a) BA (Honours) with a major in Educational Studies (no minor)
- b) BA (Honours) with a major in Educational Studies and a minor in another faculty
- c) BA (Honours) with a major in Educational Studies and a major in another faculty (double major option)
- d) A minor in Educational Studies, taken in conjunction with another degree.

Given the emergent nature of this field and because the requirements for a background in education vary depending on career goals, the program design offers students maximum flexibility in terms of choosing how they wish to situate their knowledge of education in relation to a disciplinary field and in relation to their overall academic and professional goals. Program requirements within the field of Educational Studies are summarized in Table 3.

Table 3. Credits Required for Educational Studies Majors and Minors Honours BA				
Credit Types		For Students Majoring in Ed Studies		For Students Minoring in Ed Studies
● <i>General Education</i>		21 <i>(a minimum of 6 credits from three of the following four areas: humanities, modes of reasoning, natural science, and social science at the 1000 or 2000 level [1000 level for natural science])</i>		(varies as per program requirements for Major)
● <i>Credits Outside of Education</i>	<i>If taking Major in Ed Studies (no minor) route</i>	Minimum of 42 <i>(12 at the 4000 level)</i>		
	<i>Minor (If Taking the Major/Minor Route)</i>	Minimum of 30 <i>(depending on the field; 6 at the 4000 level)</i>		
	<i>Second Major (If Taking Double Major Route)</i>	Minimum of 42 <i>(depending on the field; 12 at the 4000 level)</i>		
● <i>Education Credits</i>	<i>EICs</i>	6	42 credits <i>(12 at the 4000 level)</i>	3
	<i>Engagements</i>	12		9
	<i>Values</i>	12		9
	<i>Representations</i>	12		9
● <i>Electives</i> ¹⁶		Varies depending upon if double major or major/minor or major only		(varies as per program requirements for Major)
● Total Credits (For Major/Minor Route)		120 <i>(36 credits at the 3000 & 4000 level including minimum of 18 at the 4000 level)</i>		
● Total Credits (For Double Major Route)		120 <i>(36 credits at the 3000 & 4000 level including minimum of 18 at the 4000 level)</i>		
● Residency Requirement: A minimum of 30 course credits and at least half (50 per-cent of the course credits for this degree must be taken at York University)				

4.2 List of Courses offered to support program

All courses listed will be offered in the Faculty of Education. Courses are listed in Table 4.

¹⁶ If the minor outside of education requires more than 30 credits or the major outside of education requires more than 42 credits, students may use elective credits towards the required number of minor or major credits in the non-education field. Also all students are required to complete 18 credits outside the major (this requirement is automatically fulfilled for double majors and major/minors)

Table 4. Courses Offered in Each of the Focal Areas for the Degree (New Courses are Bolded And Are Also Referred to as ED/EDST Courses)		
Engagements	Representations	Values
ED/EDST 1100 3.0 Situated Learning and Education	ED/EDST 1200 3.0 Place and Learning	ED/EDST 1000 3.0 What is Education For?
ED/EDUC 2300 3.0 Pedagogy of the Land	ED/EDST 2500 3.0 Cultural Representations of Education	ED/EDUC 2200 3.0 Issues in Indigenous Education
ED/EDUC 2400 3.0 <i>Education as Communication</i>		
Ed/EDST 2450 3.0 <i>Multilingualism and Multiculturalism in Educational Contexts</i>		ED/EDUC 2700 3.0 <i>Teaching Internationally and Interculturally</i>
ED/EDUC 2720 3.0 <i>Teaching English in International Contexts</i>		ED/EDUC 3300 3.0 <i>Urban Education</i>
ED/EDUC 3600 3.0 <i>Literacy and Culture</i>	ED/EDST 3100 Recreation and Education	ED/EDUC 3500 3.0 <i>Inclusive Education</i>
ED/EDUC 3610 3.0 <i>New Media Literacies and Culture</i>	ED/EDST 3200 3.0 Apprenticeship Learning and Learning Communities	ED/EDUC 3650 3.0 <i>The Psychoanalysis of Teaching and Learning</i>
ED/EDUC 3720 3.0 <i>Philosophical Inquiry into Critical Thinking and Curriculum</i>	ED/EDST 3400 3.0 Policy and Public Educational Institutions	ED/EDUC 3700 3.0 <i>Educating for a Sustainable Future: A Multidisciplinary Approach</i>
ED/EDUC 3750 3.0 <i>Educational Assessment</i>		ED/EDUC 3710 3.0 <i>Global Issues and Education</i>
ED/EDUC 3760 3.0 <i>Early and Family Literacy</i>	ED/EDST 3800 3.0 Research Methods in Educational Studies	ED/EDUC 3730 3.0 <i>Education and Human Rights</i>
ED/EDUC 3770 3.0 <i>Teaching and Learning with Digital Technology</i>	ED/EDUC 3900 3.0 <i>Studies in Popular Culture</i>	ED/EDUC 3910 3.0 <i>Reflecting on and Interpreting the International Educational Experience</i>
ED/EDST 3999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context		
ED/EDST 4010 3.0 Educating for Activism	ED/EDST 4000 3.0 Community Organizations and Education	ED/EDST 4020 3.0 The Politics Of Social Transformation: Studies Of Great And Not-So-Great Educators
ED/EDST 4100 3.0 Theories, Strategies, and Challenges of Group Work	ED/EDST 4040 3.0 The Nature and Responsibility of Professional Practice.	ED/EDST 4300 3.0 Policy and Practice
	ED/EDST 4200 3.0 Creating Curriculum	ED/EDST 4500 3.0 Ethics and Educating in Community and Work Contexts
ED/EDST 4999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context		

The courses in the program include a selection of new courses that were proposed specifically for the program, a selection of courses currently offered within the Faculty of Education as electives numbers of which already have an Educational Studies focus and some of which will be modified in keeping with the BA (Ed Studies) focus. Short course descriptions of all courses, along with annotations for each course to indicate whether they are NEW, MODIFIED, or UNMODIFIED, follow.

- [New] ***ED/EDST 1000 3.0 What is Education For?*** While we often assume that we have answered the question of 'what is education for' this course seeks to reconsider the many contested desires, values and aims of education. Drawing on classical and contemporary philosophy and theory we will explore how education is concerned with cultivating 'the human' and the possibility of a common world. To wonder again about 'what education is for' – in an existential, political and ethical sense – we will ask about the nature of authority, power and freedom, about what justifies and bounds our interactions in education, and about the possibility of fostering the 'philosophical soul.'
- [New] ***ED/EDST 1100 3.0 Situated Learning and Education*** Situated theories of learning are introduced in this course and contrasted with other theories of learning. Situated learning theories also are critically examined in relation to the kinds of educational experiences that flow from the manner in which learning is framed, who or what the "teacher" is in any one instance of learning, how the "learner" is positioned, and the role of the interpersonal dynamics such as affect and power. The implications of situated theories of learning are considered in relation to the provisioning of educational experiences in a variety of contexts, with particular reference to a life-long learning perspective.
- [New] ***ED/EDST 1200 3.0 Place and Learning.*** Physical spaces invite certain types of engagements with the world while precluding others. This course explores the role of physical spaces in learning with specific reference to emotion, curiosity and relationality. Drawing on scholarship from a range of disciplines including geography, architecture, design, environmental studies and education, the course: a) reviews the history of thinking about the design of "instructional space" in schools, museums, galleries and other spaces intended to support learning; investigate the learning potential of other spaces, natural (wilderness, desert, etc.) and human-made (malls, streetcorners, etc.); b) considers the conditions that inhibit and inspire learning; and c) explores the implications for individual learning, public education, and civic engagement.
- [Unmodified] ***ED/EDUC 2200 3.0 Issues in Indigenous Education.*** This course explores wide-ranging issues in Indigenous education. It is grounded in Indigenous understandings and practices of education. It explores the ongoing impact of colonization, promotes decolonizing approaches by challenging deficit thinking and presents successful educational models with the possibility of practitioners integrating aspects of these methods into personal practice.
- [Unmodified] ***ED/EDUC 2300 3.0 Pedagogy of the Land.*** This course explores Indigenous understandings of the land as the first teacher. Participants experience and analyze the significance of the specific spaces where teaching and learning take place. Indigenous epistemologies, storying and decolonizing methodologies guide and inform the work.
- [Unmodified] ***ED/EDUC 2400 3.0 Education as Communication.*** This course focuses on the nature of communication in pluralistic societies, that is, in societal contexts characterized by linguistic and cultural diversity. Emphasis is on the social uses of speaking and writing and interpreting what is being communicated in school and classroom settings. Course content and organization are premised on a developmental and sociolinguistic viewpoint toward communication that recognizes the interdependence of language with cultural and social structures. Issues of bilingual and multilingual learners will be addressed.
- [New] ***ED/EDST 2450 3.0 Multilingualism and multiculturalism in educational contexts.*** This course explores cultural diversity and linguistic pluralism in super-diverse societies; examines social history and cultural identity against language policy, pedagogy, and social practice; and considers how education in multicultural societies can be redesigned for successful, cooperative learning outcomes.
- [New] ***ED/EDST 2500 3.0 Cultural Representations of Education.*** This course examines representations of education, as they exist in literary and visual forms. Novels, films, exhibitions, photography, and

memorials are among the types of representations that may be examined in the course. The course considers how cultural representations of pedagogy affect contemporary ideas about teaching and learning. Social institutions and popular culture have the capacity to create, not just reflect, knowledge. A central assumption of the course is that cultural representations impact the ways that educators understand themselves and their work. The course raises questions about the significance of cultural depictions, their historical and social formation, and their value for theorizing multiple learning environments.

[Unmodified] **ED/EDUC 2700 3.0 Teaching Internationally and Interculturally.** This course engages students in a comparative and international exploration of cultural traditions and beliefs, as well as their reflection on schooling and teaching practices. Throughout the course, students will examine diverse cultural and educational contexts in Canada and around the world in relation to imperialism, globalization, and internationalization, and raise questions about critical issues such as social class, race, ethnicity and gender. Students will be encouraged to develop an understanding of education in political, social, economic, linguistic, and cultural contexts around the world and search for effective pedagogical practices for teaching students of diverse cultural, class, racial, ethnic, and language backgrounds both locally and internationally.

[Unmodified] **ED/EDUC 2720 3.0 Teaching English in International Contexts.** This course addresses key dimensions of teaching English in international contexts. It examines theoretical and practical aspects of teaching English, including feedback and assessment, learner profiles, student agency, and e-learning approaches in environments where English is not the majority language.

[New] **ED/EDST 3100 3.0 Recreation and Education** This course explores the role of recreational activities, particularly sports in the schooling and educational lives, interests, aspirations and achievements of youth in contemporary society. Consideration is given to the social, cultural and political benefits and costs associated with participation in recreational activities noting how policies and programs make possible access and opportunities for participation in recreational activities in schools and community facilities. Further topics include how engagement in recreational or extra-curricular activities supports school engagement and high educational attainment, contributes to good health, teaches discipline, builds confidence, facilitates cultural experiences, and/or exchanges, and enables cultural and social integration.

[New] **ED/EDST 3200 3.0 Apprenticeship Learning and Learning Communities.** From the early British Guild system to our current high technology, postmodern society, the “apprenticeship” is central to learning in workplace communities of practice. In this course, apprenticeship learning is considered in relation to exemplary forms of acquiring knowledge/skills, the primacy of pragmatic knowledge/skills, the social distribution of knowledge/skills, and the flexible and changing nature of knowledge and skills. This course also examines this symbiotic relationship between “experts,” apprentices, and learning communities in private, governmental and social enterprises. Consideration is given to knowledge/skills distribution and social justice issues that arise in hierarchical multiethnic and mixed gender work environments.

[Modified] **ED/EDUC 3300 3.0 Urban Education.** This course focuses on the theory and practice of schooling in settings characterized by diversity related to socio-economic status, ethnicity, race, culture and citizenship. It examines historical and socio-political contexts of education and explores their impact on conceptions of learning, curriculum and pedagogy with specific application for working in urban school environments.

[New] **ED/EDST 3400 3.0 Policy and Public Educational Institutions.** This course explores the interaction in education among political authorities, public agencies, and community groups. It examines the influence that non-government organizations, such as parent groups, business and labour associations, and social movements have in the world of schooling and post-secondary education.

- [Modified] **ED/EDUC 3500 3.0 Inclusive Education** . An introduction to the policy and practice of inclusive education is presented in this course. Students will have an opportunity to select a focus for inquiry and explore inclusive education in a broad sense.
- [Unmodified] **ED/EDUC 3600 3.0 Literacy and Culture**. This course investigates how children become literate and addresses issues of second language learning and culture in literacy development. It will pursue successful practices for literacy development while exploring issues of diversity.
- [Unmodified] **ED/EDUC 3610 3.0 New Media Literacies and Culture**. This course will explore new media technologies and literacies prevalent in contemporary popular culture and of increasing importance in education. An array of new media technologies and emergent literacies will be explored to consider their pedagogical, curricular, and socio-cultural implications.
- [Unmodified] **ED/EDUC 3650 3.0 The Psychoanalysis of Teaching and Learning**. This course analyzes the emotional world of the teacher's learning and considers aspects of the psychology of teaching. It overviews psychoanalytic theory and provides a vocabulary for understanding self and other, all with a focus on interpreting emotional life in education.
- [Unmodified] **ED/EDUC 3700 3.0 Educating for a Sustainable Future: A Multidisciplinary Approach**. This course provides an introduction to the theory and practice of education for sustainability. It traces the approach from its origins in outdoor and environmental education to its contemporary expression as an interdisciplinary approach that explores the relation between education and social, economic, and environmental issues.
- [Modified] **ED/EDUC 3710 3.0 Global Issues and Education**. This course provides analyses of the process of globalization and its impact on life in Canada and abroad including its impact on education. Students will explore how global issues can be incorporated into curriculum thinking about teaching and learning.
- [Unmodified] **ED/EDUC 3720 3.0 Philosophical Inquiry into Critical Thinking and Curriculum**. This course investigates philosophical inquiry, critical thinking, and curriculum. It explores questions about how the mind works, the nature of critical thought, and implications of these for curriculum and instruction. Relevant philosophical and theoretical traditions and perspectives will be considered.
- [Unmodified] **ED/EDUC 3730 3.0 Education and Human Rights**. This course provides an analysis of human rights law as it intersects with education and schooling in Ontario.
- [Unmodified] **ED/EDUC 3750 3.0 Educational Assessment**. This course considers the conceptual and ethical issues in educational assessment; the process of developing, evaluating and using assessment procedures; the interpretation, communication and use of assessment results; and the role of gender, ethnic, cultural and linguistic diversity in educational assessment.
- [Unmodified] **ED/EDUC 3760 3.0 Early and Family Literacy**. This course will examine young children's literacy development both before and during the first years of schooling. The role of families in this development will also be examined. Issues related to diversity will be incorporated.
- [Unmodified] **ED/EDUC 3770 3.0 Teaching and Learning with Digital Technology**. This course provides an introduction to the theory and practice of teaching and learning with digital technologies. Topics include applied learning theories and the use of Web-based tools, productivity and document sharing tools, graphics software, educational games, and mobile devices.
- [New] **ED/EDST 3800 3.0 Research Methods in Educational Studies**. This course introduces students to the research methodologies associated with educational studies. Both qualitative and quantitative research methods will be introduced.

- [Unmodified] **ED/EDUC 3900 3.0 Studies in Popular Culture.** This course considers recent debates on the uses of various forms of popular culture in educational research and pedagogical practice. The course will draw upon mainstream and independent films, contemporary fiction, graphic novels and comics, and popular forms of music, as well as research in cultural studies.
- [Unmodified] **ED/EDUC 3910 3.0 Reflecting on and Interpreting the International Educational Experience.** This course is designed specifically for York University students whose undergraduate program has included an international education experience. A wide range of theories in international and intercultural education, cross cultural psychology, internationalization, globalization and post-colonial studies will provide a critical analytical framework to promote student reflection and interpretation of their international experiences. Thus, international experience is a prerequisite for this elective course. It will encourage students to integrate experiential learning into the theory and practice of their respective academic disciplines.
- [New] **ED/EDST 3999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context.** This course offers students opportunities to engage in learning about educational studies in context. Portfolios of students' academic work in educational studies are created and used as a point of departure for fieldwork experiences settings engaged in educational work. The experiences may be of three types: a) simply engaging in the varied experiences the setting offers, b) conducting an inquiry project, or c) making a contribution to the educational studies work (e.g., collaborating on policy, curricular or marketing documents; teaching, collaborating on specific site projects). An analytical report commenting on the learning in context is the culminating activity of the course.
- [New] **ED/EDST 4000 3.0 Community Organizations and Education.** In this research course students conduct a small-scale study exploring how community organizations carry out their educational functions in increasingly changing, culturally diverse, inequitable contexts. Drawing upon disciplinary conceptualizations of community in fields such as psychology, critical psychology, sociology, education, social work, students are introduced to a broad discussion of *community* and how ideas of community can inform the work of community organizations. Multiple understandings of community—as theory, as place, as method, as identity, as ideology, as policy and practice— are used to review and rethink the work of community organizations as community resources providing education for the learning needs, interests and aspirations of community members. Students examine, in reference to their own research study, the place of community organizations as constituents of change
- [New] **ED/EDST 4010 3.0 Educating for Activism.** This course engages students in possibilities of social activism and change across multiple educational sites. The course draws on histories of social movements and their educational significance. Theories of oppression, social justice and actor networks are the basis for to support student experience and interest in working for change in communities and public sites of education. Focus is given to the role of pedagogy in compelling and supporting social change in agents and communities. To discuss the complex dynamics of activism, students analyze a range of representations depicting social movements including those found in films, narratives and empirical accounts.
- [New] **ED/EDST 4020 3.0 The Politics Of Social Transformation: Studies Of Great And Not-So-Great Educators.** This course presents a side of education that involves the history, politics, and controversies of individual educators dedicated to social transformation. It draws from the perspectives of social psychology, and theories of development and social change to analyze biographies, novels, films, and historical research for insight into great and not so great experiments in public pedagogy and cultural life. The course considers the appeals and pitfalls of authoritarian, charismatic, accidental, and non-authoritarian leaders and their judgments, strategies, and problems addressed. The course is designed to create a method for analyzing contradictory motives, historical processes at work, and the effects of influencing the minds and hearts of others. Three questions frame our study: how does one judge the efficacy of the appeals of

ideals, values, and strategies of experiments in education? How do great and not so great educators communicate their work and goals? What factors and beliefs make an educator great or not so great?

[New] **ED/EDST 4040 3.0 The Nature and Responsibility of Professional Practice.** This course offers students an opportunity to consider the nature and responsibilities of professional practice. An introductory review of the central theoretical trends and debates within the field will be offered identifying competing theories and approaches. The relationship between professional knowledge and professional responsibility will be critically analyzed from a range of sociological theoretical perspectives that explain and critique the power and behavior of professions in society. The interaction between knowledge production, academic intellectual inquiry, professionalization and professional practice will be examined. A critical sociological understanding of the processes of professional education and the ways theoretical approaches understand the relations among professional responsibility, professional culture and the workings of and relationship between professions and society will be explored. Issues of diversity and equity facing professions will be raised and analyzed in terms of power relations within and between professions and society. Students will be invited to envision alternative models of professional responsibility.

[New] **ED/EDST 4100 3.0 Theories, Strategies, and Challenges of Group Work.** This course examines the development of groups: how a group comes to think together, communicate the nature of their experience, tolerate conflict and difference, create common efforts, solve interpersonal dilemmas, accept or refuse members, experiment with new ideas, and become influenced by their goals and projects. Both leaderless and leader oriented groups are discussed. A relational approach to group life is used to consider theories of group psychology, cultural differences, the nature of authority, and conflicts with self/other influence. Readings and media are oriented by case studies of group work in: hospitals, community programs serving vulnerable populations, the making of films, and public pedagogical sites such as museums and youth training programs.

[New] **ED/EDST 4200 3.0 Creating Curriculum.** The nature of curriculum and how to develop it in relation to the unique demands of specific contexts are the central concerns of this course. Working with theories in the field of curriculum studies, this course considers the nature of educational experience both broadly and in a range of contexts, including NGOs, the private sector, the cultural sector, and the health sector. Creating curriculum is here understood as the development of a set of experiences and object relations that frame both formal and informal pedagogical experiences outside of school settings, addressing how such frameworks shape the relations between people, practices, objects of inquiry, and knowledge. Areas of study include public pedagogy, museum education, community-based education, embodiment and learning, experiential education, arts-based education, and adult education.

[New] **ED/EDST 4300 3.0 Policy and Practice.** This course introduces students to various perspectives on how policy is made and enacted in public and private institutions at local, provincial, federal, and global levels. It examines relationships between policies and how the same policy leads to varied (and often unequal) effects for different groups. Finally, the course highlights how individuals and groups can influence policy processes.

[New] **ED/EDST 4500 3.0 Ethics and Educating in Community and Work Contexts.** This course provides students with an overview of the evolving field of moral educational leadership and introduces them to multiple ethical frames for interpreting case studies from community and professional settings. In reviewing, assessing and discussing real world examples, the relationship between the stance of educators who do not teach in schools and the local demands of their work is examined. Key questions include the following: how do we recognize a social good in teaching and learning? How do we distinguish the duties of educators and students? How does an educator weigh competing obligations? What is responsibility, and does it constrain or enable practice? What is a moral educator?

[New] **ED/EDST 4999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context.** This course offers students opportunities to engage in learning about educational studies in context. Portfolios of students' academic work in educational studies are created and used as a point of departure for fieldwork experiences

settings engaged in educational work. The experiences may be of three types: a) simply engaging in the varied experiences the setting offers, b) conducting an inquiry project, or c) making a contribution to the educational studies work (e.g., collaborating on policy, curricular or marketing documents; teaching, collaborating on specific site projects). The course culminates with a conference in which portfolios are presented.

Anticipated Class sizes

Class sizes will be 45 to 50 students per class throughout the program. This class size is typical class size within the Faculty of Education. TA support will be provided in keeping with protocols within the Faculty of Education.

5. PROGRAM STRUCTURE, LEARNING OUTCOMES AND ASSESSMENT

5.1. Program Goals and Outcomes

The BA in Educational Studies incorporates all elements identified in York University's matrix for the BA degree so that it is in keeping with degree level expectations (see Table 5). The BA in Educational Studies is intended to introduce students to the field of education in its broadest sense. Further, the three strands around which the program is offered—values, representations, and engagements—capture the spirit of the Undergraduate Degree Level Expectations (UUDLES). Values permeate what we see as knowledge as well as what we refuse to see; the UUDLES on the *Breadth and Depth Of Knowledge* are informed by our epistemic values. Representations are instantiations of knowledge; they are knowledge enacted, and in that sense echo the UUDLES devoted to *Knowledge of Methodologies* and *Application of Knowledge*. Finally, Engagements offer opportunity to think about engaging with people and contexts and in that sense broadly *Awareness of the Limits of Knowledge* speaking offer opportunities to develop UUDLES on *Communication Skills*, , and *Autonomy and Professional Capacity*.

The field of education is, by its nature, interdisciplinary in that it draws from fields such as philosophy, sociology, psychology, anthropology and literary studies. This interdisciplinary perspective permeates the program and offers students the opportunity to develop a sense of the breadth of the field of education. Additionally, as students progress through the program, they will have the opportunity to focus in depth on particular areas of education (e.g., recreation, the development of the professions, activist education, international education, community-referenced education) and to explore issues specific to these areas while continuing to draw on interdisciplinary roots to inform that thinking.

Throughout individual courses, methods of identifying, researching and analyzing problematics are presented, with many courses offering both theoretical as well as practical assignments through which students can demonstrate their knowledge of the methodologies of the field. Also, a specific course on research methods is required of all students. Not only are opportunities to apply theoretical, methodological, and conceptual knowledge afforded students through assignment structures, but the program offers two three-credit required experiential education courses in which students will be afforded opportunities to:

- a) experience the nature of one or more settings providing educational services,
- b) conduct research in that setting, or
- c) collaborate on a project that their experiential hosts are working on in the setting.

These courses interrelate with specific courses at the third and fourth year and, as such, provide a highly academically and experientially rich context for learning.

Because the educational studies degree is so grounded in real-life contexts, communication skills are fundamental. Besides the standard genres of academic papers (e.g., research proposals,

reviews of the literature, analytical papers, critiques), other genres of communication are explored in the degree. These genres involve multimodal literacies such as might be found in short movies, comic strips, and other popular forms of communication and are oriented towards the perspective of adapting complex ideas for multiple audiences and for contemporary vehicles of communication. In the research methods course, in particular, emphasis is given to consideration of adapting research findings for multiple audiences and in using tools (e.g., infographics) to do so.

The interdisciplinary and experiential nature of the program means that students routinely are challenged with respect to the limits of knowledge, the ambiguities that confront them both epistemically and practically. Finally, because of the strong emphasis on situated experiential learning, both in designated courses and throughout the curriculum as a whole, the program is geared towards cultivating an educational studies professional who engages in ethical practice and, in keeping with the general orientation of the Faculty of Education as a whole, acts in socially responsible ways.

To illustrate the manner in which the curriculum maps onto the general degree level expectations for the BA, a matrix outlining the relationship of each course with the BA UUDLES is presented in Table 6. The numbers and letters in the table reference specific UUDLES as presented in Table 5. In addition, for new courses proposed (See Appendix B), the specific UUDLES are listed following the objectives of each course.

Table 5. General Degree Level Expectations for the BA (Educational Studies)	
Expectation	General Realization within the BA (Educational Studies)
1. Depth and Breadth of Knowledge	<p>a) a developed knowledge and critical understanding of the key concepts, methodologies, theoretical approaches and assumptions in educational studies</p> <p>b) a developed understanding of many of the major areas of study within educational studies, including how these areas are informed by disciplines such as social work, sociology, linguistics, equity studies, community studies, work and society</p> <p>c) a developed ability to:</p> <ul style="list-style-type: none"> i) gather, review, evaluate and interpret information; and ii) compare the merits of alternate hypotheses or creative options within different educational studies social, political and pedagogical contexts <p>d) a developed, detailed knowledge of and experience in research in educational studies in general and within specific learning engagement contexts in particular</p> <p>e) developed critical thinking and analytical skills inside and outside educational studies</p> <p>f) the ability to apply learning from educational studies to a wide variety of situations</p>
2. Knowledge of Methodologies	<p>a) an understanding of methods of enquiry and creative activity in educational studies to enable the student to:</p> <ul style="list-style-type: none"> i) evaluate the appropriateness of different approaches to solving problems related to theoretically and empirically defensible ideas and strategies in education; ii) devise and sustain arguments relating to pedagogy using these methods; and iii) describe and comment upon particular aspects of research and scholarship relating to educational studies.
3. Application of Knowledge	<p>a) the ability to review, present and critically evaluate qualitative and quantitative information to:</p> <ul style="list-style-type: none"> i) develop lines of argument; ii) make sound judgments in accordance with the major theories, concepts and methods of educational studies; iii) apply underlying concepts, principles, and techniques of analysis, both within and outside educational studies; iv) use this knowledge in considering issues related to pedagogical provisioning or specific educational problematics and situations; and <p>b) the ability to use a range of established techniques to:</p> <ul style="list-style-type: none"> i) initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information; ii) propose solutions; iii) frame appropriate questions for the purpose of solving a problem; iv) solve a problem, or create a pedagogical approach/curriculum that is sensitive to context; and <p>c) the ability to make critical use of scholarly reviews and primary sources.</p>
4. Communication Skills	<p>a) the ability to communicate information, arguments, and analyses accurately and reliably, orally and in writing to a range of audiences, adapting material in terms of genres and modalities used to suit different audiences and purposes of communication</p>
5. Awareness of Limits of Knowledge	<p>an understanding of the limits to their own knowledge and ability, and an appreciation of the uncertainty, ambiguity and limits to knowledge and how this might influence analyses and interpretations.</p>
6. Autonomy and Professional Capacity	<p>a) qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:</p> <ul style="list-style-type: none"> i) the exercise of initiative, personal responsibility and accountability in both educational studies contexts; ii) working effectively with others; iii) decision-making in complex educational contexts <p>b) the ability to manage their own learning in changing circumstances, both within and outside the educational studies and to select an appropriate program of further study; and</p> <p>c) behavior consistent with academic integrity and social responsibility</p>

Course	Expectation Categories					
	1. Depth & Breadth of Knowledge (A,B,C,D,E,F)	2. Knowledge of Methodologies (A)	3. Application of Knowledge (A,B,C)	4. Communication Skills ¹⁷ (A)	5. Awareness of Limits of Knowledge (A)	6. Autonomy and Professional Capacity (A,B,C)
ED/EDST 1000	A,C,E,F	A	A,B,C	A	A	A,B
ED/EDST 1100	A,B,C		A,B,C	A	A	A
ED/EDST 1200	A,B,C,D,E	A	A,B	A	A	A,B
ED/EDUC 2200	A,B	A	A,B,C		A	A,B,C
ED/EDUC 2300	A,B,	A	A,B,C	A	A	A,B,C
ED/EDUC 2400	A,B	A	A,B,C	A	A	A,B,C
ED/EDST 2450	A,B,C,D,E		A,B,C			A,B
ED/EDST 2500	A,B,C,D,E,F	A	A,B	A		A
ED/EDUC 2700		A	A,B,C			A,B,C
ED/EDUC 2720	A,B		A,B,C			A,B,C
ED/EDST 3100	A,C,D,E,F	A	A,B	A		A,B
ED/EDST3200	A		A,B,C	A		A,B,C
ED/EDUC 3300			A,B,C		A	A,B
ED/EDST 3400	A,C	A	A,B,C		A	A,B,C
ED/EDUC 3500	A,B	A	A,B,C	A	A	A,B,C
ED/EDUC 3600			A,B,C			
ED/EDUC 3610	A,B		A,B,C			A,B,C
ED/EDUC 3650	A		A,B,C	A	A	A,B,C
ED/EDUC 3700	A,B	A	A,B,C			A,B,C
ED/EDUC 3710	A,B	A	A,B,C			A,B,C
ED/EDUC 3720	A,B	A	A,B,C			A,B,C
ED/EDUC 3730	A,B					A,B,C
ED/EDUC 3750	A,B		A,B,C			A,B,C
ED/EDUC 3760			A,B,C			
ED/EDUC 3770	A,B		A,B,C			
ED/EDST 3800	A,B,C	A	A,B,C	A	A	A,C
ED/EDUC 3900	A,B		A,B,C			A,B,C
ED/EDUC 3910	A	A	A,B,C			A,B,C
ED/EDST 3999	C		A,B,C	A		A,B,C
ED/EDST 4000	A,B,C,E	A	A,B,C	A		A
ED/EDST 4010	A,C,E,F		A,B,C	A	A	A,B,C
ED/EDST 4020	A		A,B	A	A	B
ED/EDST 4040	A,B,C	A	A,B,C		A	A,B,C
ED/EDST 4100	A	A	A,B,C	A	A	A,B,C
ED/EDST 4200	A,C,E,F	A	A,B,C	A		A,B,C
ED/EDST 4300	A,B,C	A	A,B,C		A	A,B,C
ED/EDST 4500	A,B		A,B,C		A	A,B,C
ED/EDST 4999	C		A,B,C	A		A,B,C

¹⁷ It should be noted that generally all courses foster communication skills in that typically students are involved in crafting papers, presentations and the like. The ones which have a specific UUDLE listed are those which pay particular attention to the area of communicating to varied audiences as per the BA UUDLE.

5.2. Program structure

The program is organized so that a set of foundational courses is required of all students in the first year of study. These courses introduce students to the three major strands around which courses are organized—values, representations, and engagements. *EDST 1000 3.0 What is Education For?* offers a foundational orientation to large questions of education and a point of departure from which students can consider how such questions inhabit formal and informal pedagogical settings, invite certain types of engagements from “teachers” and “learners,” and are often “the unspoken” of educational settings. This broad based view is complemented by *EDST 1100 3.0*, which introduces students to theories of learning and the consequences of these theories for teaching, as well as *ED/EDST 1200 3.0*, which examines the role of physical space in learning. Students take courses targeted towards disciplinary breadth through their General Education requirements and to complement their work as educational studies professionals. In particular, students will be encouraged to target some of their General Education courses in areas referred to as “soft skills”¹⁸ (e.g., professional writing skills, presentation skills, business writing).

For the second, third and fourth years of studies, student engage in study across the three strands of the program. Majors are required to complete a minimum of 9 credits in each of the strands beyond those credits completed in the foundational year. Minors are required to complete an additional 6 credits in each strand beyond the credits completed in the foundational year. In third year, the required *EDST 3999 Experience, Contribute and Inquire: Learning in Context* course and the *EDST 3800 Research Methods in Educational Studies* course operate as mechanisms for consolidating learning and for relating academic work to experiential work.

Advanced coursework, much of which is taken in the final year of studies, involves the strengthening and consolidation of disciplinary and experiential connections through the nature of the coursework itself and through *EDST 4999 Experience, Contribute and Inquire: Learning in Context*. To illustrate the experiential and academic intersections of the program in advanced coursework, a description of the nature of experientially-based work from advanced courses is presented in Table 7.

Courses	Experiential Education Assignments
<i>ED/EDST 3100</i> Recreation and Education	Analytical paper based on visit to community/recreation centre
<i>ED/EDST 4000</i> Community Organizations and Education	Research exploring how community organizations carry out functions in diverse contexts
<i>ED/EDST 4010</i> Education for Activism	Fieldwork and paper
<i>ED/EDST 4040</i> The Nature and Responsibility of Professional Practice	Fieldwork with accompanying papers
<i>ED/EDST 4200</i> Creating Curriculum	Case study or curriculum intervention
<i>ED/EDST 4500</i> Ethics and Educating in Community and Work Contexts	Research report based on observational study

¹⁸ Numerous presentations at the Conference Board of Canada’s Post-Secondary Education Summit held in the fall of 2013 made reference to soft-skills as being beneficial to employability.

5.3. Appropriateness of Methods for Assessing Student Achievement and the Relationship of Assessment to Degree Level Expectations

Methods of assessment within the degree vary depending upon the content of the course and the nature of the assignments within each course. Generally speaking, a wide range of methods are used. The diversity of assessment methods is consistent with the diversity of the field of educational studies and implicitly demonstrates an understanding of the importance of context to assessment. Many courses use analytical, theoretical and conceptual essays, examinations, and presentations; however, these traditional academic approaches are complemented by a wide array of field study experiences which involve the application of knowledge to a context. Additionally, in a number of courses, an emphasis is placed on communication ideas in varied forms (e.g., video, graphics) for varied audiences, a necessary skill given the nature of the varied work of educational studies professionals. Similarly, reflective analytical assignments develop understandings of oneself as an autonomous professional who works in relation to specific contexts and conducts oneself in socially responsible ways. The design of assignments is reflective of the nature of the learning engagement within the course and, as such, also provides students with implicit exemplars of the importance of situation in educational assessment. It should also be noted that the nexus of academic coursework and experiential work is made visible through ED/EDST 3999 and ED/EDST 4999 as students engage in making sense of their theoretical and academic work through experiencing, inquiring and contributing in educational settings.

5.4 Program Length of Graduate Programs: N/A

5.5 Delivery Methods

A wide variety of delivery methods is represented in the curriculum for the degree. Of the new courses proposed, about a third involves blended delivery with on-line and face-to-face designed into the course from the start. About another third involve some uses of technology to support the work including web-conferencing and Moodle used in a variety of ways, and some other software technologies. As noted earlier, a number of courses have strong fieldwork components. Face-to-face engagements are also quite varied in nature ranging from short lecture and discussions, to group work, to conferences, to use of film, role play and other active learning strategies to foster learning. These delivery methods are in keeping with the theoretical base of situated learning that informs the degree.

6. ADMISSION REQUIREMENTS

6.1 Applicants from Ontario Secondary Schools

BA Honours

- Ontario Secondary School Diploma
- Six 4U or 4M courses, including ENG4U
- Applicants from Ontario secondary schools will be subject to similar admission averages for BA programs at York but the intent to aim for Overall Admission Averages in the mid to high 70s.

- Students who have not completed four full years of study in Canada in English at the secondary-school level or in a country where English is a primary language of instruction must demonstrate language proficiency in English. Acceptable language tests and scores include the following: YELT—overall band 1-5; TOEFL 220 (paper based: 560; iBT: 83) IELTS—6.5. Further exemptions are noted at the following website: http://futurestudents.yorku.ca/requirements/docs_language

6.2 Alternate Admissions

Students from alternate pathways are encouraged to apply. Examples of students from alternate backgrounds include students from other provinces, transfer students, mature students, and internationally educated students. In addition, it should be noted that the Faculty of Education is working with Seneca College to develop a degree pathway for students who are enrolled in Human Services programs at Seneca College. Requirements for transfer, mature and senior applicants are listed below:

University Transfer

- University transfer students who have completed a minimum of four full-year courses or one year of accredited full-time degree studies or equivalent with a minimum overall grade point average of 2.30 on a 4-point scale (C+/65 per cent or equivalent).

All courses taken, including failed courses, will be used to calculate the admission average. If a student's transcript shows repeated courses, the second grade achieved is the grade that will be used for the purpose of calculating average(s). Meeting the minimum requirements does not guarantee admission to the University.

University courses taken may be assessed for potential transfer credit. For more information, see the Eligibility for Transfer Credit section.

College Transfer

- Transfer students who have completed a minimum of two full semesters or one year of full-time study in an academic program from an Ontario College or Institute of Technology and Advanced Learning (ITAL) in Ontario with a minimum overall average of 3.00 on a 4-point scale (B/70 per cent), including all attempted courses, may be considered for admission; or
- A minimum of one year of full-time study in an academic program at an accredited/recognized college outside of Ontario with a minimum overall average of 3.00 on a 4-point scale (B/70 per cent or equivalent), including all attempted courses, may be considered for admission.

If a student has not graduated from a college program and the transcript shows repeated courses, the second grade achieved in the course(s) is the grade that will be used for the purpose of calculating average(s). Meeting the minimum requirements does not guarantee admission. Academic college courses may be assessed for potential transfer credit

Mature Students

To be considered for admission under the University's "Mature Student" regulations you must:

- be at least 21 years of age or older as of the first day of classes of the session for which you have applied;
- have been out of full-time high-school studies for at least two years or have returned to upgrade after a two-year absence;
- have attempted less than one full year of studies at an accredited university or college;
- not have an unfavourable academic record; and
- have demonstrated potential for success through academic, professional or volunteer activities and other accomplishments.

You may also be considered for admission as a mature student if you have completed a York University pre-university course, offered through the Division of Continuing Education or a Women's Bridging course, with a minimum grade of B, if you also meet specific program and language-proficiency requirements.

Senior Citizens

Senior citizens who wish to be admitted to the University (as candidates in a degree program or as visiting students) are evaluated as mature students unless they have completed previous postsecondary studies (see the appropriate sections above).

7. RESOURCES

7.1 Faculty Expertise

While all faculty members in the Faculty of Education have research programs oriented towards investigating questions of education, quite a number of faculty members' research is oriented toward exploring issues such as community work, activism, policy work, and assessment. Additionally, it should be noted that within the Graduate Program in Education, a large portion of the curriculum is devoted to the broader conceptualization of education that will now be reflected in the undergraduate program as the Bachelor of Education degree will be complemented by the B A (Educational Studies). Finally, the Faculty of Education is home to the York Centre for Education and the Community (YCEC) which has cultivated links to the community over the past several years.

7.2 Role of Retired, Adjunct and Contract Faculty

Because of the recently announced restructuring of the Bachelor of Education degree (e.g., Concurrent and Consecutive classes will be combined and all but two off-campus sites eliminated), it is anticipated that tenure stream faculty freed up from teaching in that program will move to teach in the BA (Educational Studies). Therefore, it is not anticipated that there will be a need for adjunct and contract faculty, with the exception of one contractually-limited faculty member who worked on development of the degree. Some seconded faculty members may have a portion of their load utilized; these are faculty members who have expertise with partner school districts and who engage in a three-year teaching

experience at the university. These faculty members will most likely be involved in courses that are not ED/EDST courses. At the time of this writing, none of the faculty members whose names are attached to the proposal is retired.

7.3 Laboratory Requirements

No laboratory space is required.

7.4 Space Requirements

It is expected that many of the courses would be accommodated within the existing capacity of dedicated rooms that the Faculty currently manages, given the changes in the BEd program. That being said, additional classroom space may be required. The program will not require additional office space for support staff. As the program grows and additional faculty members are hired, offices to accommodate new faculty members will be required.

7.5 Information Technology Requirements

It is expected that e-learning will be a strong component of the program. The Information and Learning Technologies team in the Faculty of Education currently supports faculty members and instructors in the Undergraduate, Graduate and Professional Development programs in the use of Moodle. As a result of a realignment of roles and responsibilities within the Faculty, an Educational Developer will be joining the team shortly to support faculty members and instructors to enhance their on-line teaching practice. Although their current team is in a position to provide support to the new program with this new incorporation we can ensure that the support will be of the highest caliber.

The Education Resource Center houses a lab with the most current technology used in support of teaching in different environments such as SmartBoards, clickers, iPads, etc. All these resources will be available for students in this program.

7.6. Anticipated Class Size and Experiential Education Requirements

Anticipated class sizes are 50 students. This size is in keeping with class sizes in the Bachelor of Education degree which shares some courses with the BA (Educational Studies).

The experiential component of the BA (Ed Studies) draws upon the highly successful experiential education component associated with the Bachelor of Education degree which involves placement of students in community settings. These settings currently include the following:

ACE (Advanced Credit Experience)

Archives of Ontario

Basketball Beginnings

Birkdale Residence

Black Creek Community Health Centre- Freedom Fridays Program

Brampton Caledon Community Living (various locations)

**Centre for Education and Training: Newcomers Info Centre
Counselling and Disability Services - York University**

CINEFRANCO

COSTI York Region- English Conversation Circles

ETBA Association- MASK Program

Frontier College - In Partnership with:

Doorsteps Neighbourhood Association (Elia and Amesbury Programs)

San Romano Way Revitalization Association

Manulife Homework Club

Baycrest P.S. Homework Club

Frontier Independent Studies (Al Green Site)

North York Women Shelter

High Park Nature Centre

Holland Bloorview Kids Rehab

Inclusive Schools & Community Services - YRDSB- Community Resource Facilitators Program

Inclusive Schools & Community Services - YRDSB -Teacher Liaison Unit

Inner City Angels (various locations)

Inner City Outreach - Oakdale Site and Africentric Site

Jane and Finch Community Centre - Early Years

Jane and Finch Community Tennis Association

Living Arts Centre

Massey Centre for Women

Micro Skills -Women and Violence Prevention Program

Micro Skills - Get Up! - Don Bosco Program

North York Community House- SEPT Program

Pathways to Education - Rexdale- Tutoring Program

Pathways to Education - Lawrence Heights - Tutoring and Mentoring Programs

Pathways to Education - Scarborough Village - Tutoring and Mentoring Programs

Ralph Thornton Centre

ROM

St. Augustine After School Program

Tennis Canada - National Junior Tennis Program

The 519 Church Street - Queer Parenting Program &Early Years Program

The Riverwood Conservancy

The Stop Community Food Centre

Toronto Botanical Gardens - Living Winter Program & Allan Gardens Growing Under Glass Program

Toronto Foundation for Student Success - Beyond 3:30 (various locations)

Toronto Public Library - After School Newcomer Hubs (various locations)

Toronto Public Library - Leading to Reading (various locations)

Upfront Theatre

Urban Squash Toronto

Vaughan Community Health Centre

Vaughan Public Libraries

Voila Learning - Les Clubs de Devoirs Programs & OHH Program

Wadoka Academy

Word Play - Reading in the City Program & Writing in the City Program

Working Women Community Centre - On Your Mark Tutoring and Mentoring

Zareinu

The Faculty of Education is expanding the purview of the administrative officer responsible for recruiting sites for placement so that these sites will not only include community agencies, as is the case now, but will also include a wide array of sites related to the areas likely to be explored by students.

The Faculty of Education currently has a database describing the agencies, the student commitments that these agencies expect, and agreements entered into between agencies and students (See Appendix D for a sample contract). This database will be the starting point for first expanding the role of service learning within these agencies, and from there moving towards involving other agencies such as museums, zoos, other cultural institutions, businesses, recreation centres, health agencies and the like.

Because we operate on the model of service learning, the needs of our partners drive the service learning component. We request from agencies their requirements, Students are presented with information of each agency and are asked to identify their first three preferences. Opportunities offered are matched to student preferences.

Typically, about a third of the current placements involve students in experiences that relate closely to school-based experiences. If Educational Studies students are placed in these settings, other service needs of the agency (e.g., community outreach, community education, research) will form the basis of the placement.

The basic architecture of the model currently used will be ported to the BA (Educational Studies). As the program starts up, it will be running for two years prior to the implementation of the EIC courses which will be ample time to build additional new community partnerships necessary for the implementation of the experiential component. We already have commitments from some of our larger experiential education partners as well as from some new partners to expand the placement options for students in the BA (Educational Studies) (See Appendix C for letters of support). However, it is also the case that because of the soft funding underwriting many agencies, and because of the changing nature of the work of these agencies, specific service learning opportunities will be identified closer to the implementation date of the ED/ESDT 3999 3.0 and 4999 3.0 courses.

Table 8. Listing of Faculty Members

Faculty Member, Rank	Areas of Specialization
Alsop, Steve <i>Professor</i>	Public policy and science, science education, sustainability
Axelrod, Paul	History of schooling and higher education, policy studies in education, adolescence and

<i>Professor</i>	student life
Barkaoui, Khaled <i>Associate Professor</i>	Educational assessment, program evaluation, second language learning, and writing
Barrett, Sarah <i>Associate Professor</i>	Professional cultures, professional ethics, teaching about ethics and science education.
Britzman, Deborah <i>Distinguished Research Professor</i>	Psychoanalysis and education; mental health; pedagogy of teacher education; adolescent development.
Brushwood Rose, Chloe <i>Associate Professor</i>	Curriculum theory; narrative and visual research methods; community-based and participatory media; social difference and self-representation; theories of aesthetic experience; feminist and queer theory; psychoanalytic and affect theory; the emotional worlds of teaching and learning.
Crichlow, Warren <i>Associate Professor</i>	Sociology of education; urban studies in schools, families, neighborhoods and adolescent development; cultural studies and education; multicultural pedagogy and criticism; qualitative research methods; pedagogy and popular culture
Di Paolantonio, Mario <i>Associate Professor</i>	Philosophy of education; ethics; democracy and education; commemorative pedagogy; memory studies; social justice and education
Dion, Susan <i>Associate Professor</i>	Indigenous and decolonizing education, urban Indigenous education and critical pedagogy
Dippo, Don University Professor	Social and political organization of knowledge; environmental and sustainability education; global migration and settlement; university/community relations; and teacher education
Dlamini, Nombuso <i>Associate Professor</i>	Critical pedagogy, postcolonial theory and de-colonizing research methodologies, studies in Youth social identities, socio-cultural studies in education, literacy and critical sociolinguistics, migration and diaspora studies, and gender matters.
Dunlop, Rishma <i>Professor</i>	Literary studies, English education, research and artistic production, arts education, creative writing, writing pedagogy, film and education, medical humanities, human rights and social justice
Farley, Lisa <i>Associate Professor</i>	History and memory; studies in childhood; the emotional world of teaching/learning history; psychoanalytic thought; ethical philosophies of education
Fine, Esther <i>Associate Professor</i>	Peacemaking and conflict resolution, diversity and social justice, alternative models of schooling, language and literacy, creative writing
Gaetz, Stephen <i>Professor</i>	Homelessness, infectious diseases and pandemics; adolescence, youth culture and resistance; street youth, their economic strategies, legal and justice issues; strategies for mobilizing homelessness research
Gilbert, Jen <i>Associate Professor</i>	Sexuality education, LGBTQ issues in education, and psychoanalytic theories of teaching and learning
Haig-Brown, Celia <i>Professor</i>	(De)colonizing research and practice; critical ethnography; critical/feminist pedagogy; learning from the land; adult & community education; curriculum development; ways of knowing
Ippolito, John <i>Associate Professor</i>	Adult education in contexts of linguistic, cultural and racial hyperdiversity; marginalized families and education; community education; digital literacy; discursive constructionism; community based participatory research; social capital theory
Israelite, Neita <i>Associate Professor</i>	Disability and inclusion
James, Carl <i>Professor</i>	Educational and occupational access and equity for marginalized youth; the implications of suburban "urbanization" for young people; the complementary and contradictory nature of sports in the schooling and educational attainments of racialized students; community-centered approaches to learning, identification/identity pertaining to race, ethnicity, gender, class, and immigrant status.
Jenson, Jennifer <i>Professor</i>	Technology, pedagogy, digital games, popular culture, media, design
Khayatt, Didi	Feminist pedagogy, sexuality and gender and equity studies

<i>Professor</i>	
Killoran, Isabel <i>Associate Professor</i>	Inclusion/special education, differentiation, equity specifically as it relates to disability, diversity, early childhood/elementary education, teacher attitudes, mental health, critical disability studies
Krasny, Karen <i>Associate Professor</i>	Aesthetics, affect theory, arts, critical theory, curriculum, diaspora, early childhood education, ethics, ethnography, feminism, gender, higher education, identity, language, literacy, literary studies, philosophy of education, psychology, second language, social justice, teacher education
Lotherington, Heather <i>Professor</i>	Multilingual education; multimodal literacies; literacy and culture; communication and education
Lynch, Jacqueline <i>Associate Professor</i>	Early literacy development and achievement; family literacy; parents' and teachers' literacy beliefs; parent involvement in education; sociocognitive and sociocultural approaches to teaching and learning literacy; early childhood education and development.
Mannette, Joy <i>Associate Professor</i>	Ways of knowing; community organizing for change; cross-cultural learning; issues in university access for minority students; policy and decision-making; qualitative research
Martin, Lyndon <i>Associate Professor</i>	Mathematics Education
Mayer, Connie <i>Associate Professor</i>	Language and literacy development in learners at risk (e.g., deaf and hard of hearing); emergent literacy; early intervention; bilingualism; the role of signed language in education D/HH learners; sociocultural theory; classroom discourse; teacher education
Millet, Pam <i>Associate Professor</i>	Clinical and educational audiology, deaf and hard of hearing education, online learning, universal design and accessibility for individuals with hearing loss
Mishra Tarc, Aparna <i>Associate Professor</i>	Aesthetics, diaspora, history and memory, literature, pedagogy, psychoanalysis, urban education
Morbey, Mary Leigh <i>Associate Professor</i>	Web 2.0 technologies including social media; ethics and information communications technology (ICT) with an emphasis on access; the global south/developing world; national museum virtual spaces; technological mediations in visual culture; virtual opening learning environments
Murphy, Sharon <i>Professor</i>	Assessment, literacy education, early childhood education
Norquay, Naomi <i>Associate Professor</i>	History; music; the arts; social justice education
Owston, Ron <i>University Professor</i>	Teaching and learning with digital technology
Peguret, Muriel <i>Assistant Professor</i>	Teaching and learning of French as a second language, immersion & post-immersion context in Canada, language competence, language awareness, the common european framework of reference for languages, the teaching and learning of phraseology, teacher education
Pitt, Alice <i>Professor</i>	The emotional world in teaching and learning; psychoanalytic theory; education and the public good in times of cosmopolitanism and globalization; teaching and learning at the university
Rapke, Tina <i>Assistant Professor</i>	Graph theory; the learning and teaching of mathematics at all levels
Sandra Schector <i>Professor</i>	Language policy and planning, language socialization, language and cultural identity, and bi- and multi-lingual language acquisition and learning.
Shanahan, Theresa <i>Associate Professor</i>	Education law and policy (K-12 and postsecondary), the political economy of postsecondary education, university governance (system and institutional decision-making), professional education, professional governance, professional ethics, and human rights in education.
Shapson, Stan <i>Professor</i>	Educational psychology, research & innovation, bilingual & multilingual programs
Stanworth, Karen <i>Associate Professor</i>	Education and art with a special emphasis on the history of visual culture
Kurt Thumlert	Media in/for identity and agency, literacy learning and art/knowledge production in

<i>Assistant Professor</i> (effective January, 2015)	traditional and informal educational settings; new creative media; qualitative research and arts-based inquiry; critical multiliteracies and new media studies
Desai Trilokekar, Roopa <i>Associate Professor</i>	Internationalization of higher education as government and institution policy, higher education policy making, internationalization of curricula, teaching and learning, student experiential learning through international education, internationalizing pre-service and in-service teacher education, intercultural and cross cultural education and learning.
Winton, Sue <i>Associate Professor</i>	Critical policy research examines how education policies and policy processes support and/or undermine critical democratic commitments to equity, diversity, social justice, and public participation in policymaking.
Wiseman, Laura <i>Assistant Professor</i>	Layers of Hebrew language & literature; international curriculum development for acquisition of communicative-heritage language and literature (TaNaKh & Sifrut); contrastive analysis (L1- L2); art & artifacts in education; women's self writing
Yon, Dan <i>Associate Professor</i>	Race, racism, anti-racism; multiculturalism and cosmopolitanisms; school ethnography; anthropology and education; popular culture and youth
Zha, Qiang <i>Associate Professor</i>	Chinese and East Asian higher education, international academic relations, global brain circulation, internationalization of higher education, globalization and education, differentiation and diversity in higher education, theories of organizational change, knowledge transfer and commercialization, and international migration and development

Contractually limited faculty

Robert Wager	Technological education, apprenticeship education
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8. ENROLMENT PROJECTIONS

Enrolment goals are to admit 50 students for the major and minor in the first year (Admissions for majors external to York will be delayed until the degree is listed on OUAC). In subsequent years, the enrolment goals are to enroll 50 majors and 50 minors per year.

Year	Majors	Minors	Total
2016	50	50	100
2017	100	100	200
2018	150	150	300
2018	200	200	400

Year	A²⁰	a	B	b	C	c	D	d	Total Credits Taught	Half Courses
2016	9	9							18	6
2017	9	6	9	9					33	11
2018	12	9	9	6	9	9			54	18
2019	12	6	12	9	9	6	9		63	21
2021	9	9	12	6	12	9	9	9	75	25
2022	9	6	9	9	12	6	12	6	69	23
2023	12	9	9	6	9	9	12	9	75	25
2024	12	6	12	9	9	6	9	6	69	23

The courses identified above are courses dedicated to BA (Educational Studies) students. There will also be some EDUC (as opposed to EDST) courses offered in which both BA (Educational Studies) and Bachelor of Education students will be enrolled and the spaces available in these classes for Educational Studies students will allow them flexibility in course selection.

9. SUPPORT STATEMENTS

Support statements are being, unless indicated otherwise, immediately follow Section 9:

- Ron Owston, Dean, Faculty of Education
- Rhonda Lenton, Vice-President Academic and Provost
- Peggy Warren, Liaison Librarian—Education, York University Libraries
- Don Hunt, University Registrar
- Kim Michasiw, Vice-Dean, Liberal Arts and Professional Studies
- John-Justin McMurtry, Chair, Department of Social Sciences
- Marcel Martel, Chair, Department of History
- Martin Lockshin, Chair, Department of Humanities
- Peter Cumming, Children's Studies Program
- Barbara Heron, Director, Social Work
- Joel Goldberg, Department of Psychology
- Steven Tufts, Chair, Department of Geography
- Susan Ehrlich, Undergraduate Program Director, Linguistics
- Community agencies (See Appendix C)
 - Danielle Zanotti, United Way, York Region
 - Lori Lord, CEO, Spectrum Health Care
 - Marika Misener, Operations Manager, Penmar Automation

¹⁹ EDUC courses will be offered on an on-going basis in the B.Ed. degree. Initially, it is anticipated that Educational Studies students will be dispersed across many of these courses and these EDUC courses are not accounted for in Table 10. Over time, it is likely that sections of EDUC courses may be offered specifically for Educational Studies students.

²⁰ The upper and lower case letters here refer to cohort groupings where the uppercase letter refers to Majors and the lowercase letter refers to Minors.



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Memo

To: Rhonda Lenton, Academic Vice-President and Provost

From: Ron Owston, Dean *RO*

Date: October 16, 2014

Subject: Proposed BA in Educational Studies



I am writing in support of the four-year honours BA in Educational Studies that the Faculty of Education is in the process of developing. The degree program, which will not lead to teacher certification, will be aimed at those seeking education-related careers in cultural institutions such as museums, art galleries and nature conservancies; non-governmental agencies involved in a wide array of service provision; recreational services; community organizations; and businesses.

The program has three routes to completion:

- a) BA (Honours) with a major in Educational Studies and a minor in another faculty
- b) BA (Honours) with a major in Educational Studies and a major in another faculty (double major option)
- c) A minor in Educational Studies, taken in conjunction with another degree.

High school students will be admitted directly with an OSSD and we are in the process of developing an articulation agreement with Seneca College for entry of diploma students in Child and Youth Worker and other similar programs.

The new BA program is a key component of our plans for diversifying the Faculty of Education's offerings and insulating us to some extent from the vagaries of teacher education enrolment caps and regulation that are beyond our control. The program is situated in the field of Education, Human Services, and Community Development, which is one of ten areas of institutional strength cited in the University's Strategic Mandate Agreement (SMA section 5.1, p. 12). In the same section Healthy Individuals and Communities is one of five areas designated for growth in the SMA and our proposed BA in Educational Studies is listed in the Appendix of the SMA as a new program that our Faculty will bring forward.

We expect that the program, which will be unique in Canada, will attract 50 students when it begins and grow to 350 students within four years. The timing of this proposal is fortuitous because we will be able to mount the BA program partly through re-deployment of existing resources that will be freed up as a result of our new two-year BEd which will be offered beginning Fall 2015. For example, we are closing two of our off-campus Consecutive program sites thus eliminating space rental, maintenance, and administrative costs. We will no longer be grouping Consecutive students on campus by "site" cohorts and again saving administrative and support costs. Additionally, the new BEd will no longer have separate Concurrent and Consecutive programs operating with different delivery models as all students, regardless of which program they are in, will be taking the same classes together.

Although there will be some resource implications for mounting the new program I expect that they will be manageable. I will outline these implications in five areas and describe how we propose to address them.

1. **Teaching.** We had three faculty retirements in 2014 and two more faculty have given notice to retire in 2015. None of these positions are in the process of being filled so when hiring faculty we will be able to take into consideration the needs of the BA program. I expect that two of these positions will be filled by Alternate Stream faculty which will result in greater teaching capacity (i.e., 2.0 FCE greater than Professorial Stream appointments) in the Faculty as well. Starting in 2015 we will be increasing the teaching load of our seconded faculty who teach in the BEd from 3.0 to 3.5 FCEs to align their loads with the Alternate Stream. With the 16 seconded faculty that we currently have the result will be a significant gain (4.0 FCE) in teaching resources to accommodate the needs of the BEd program and, therefore, freeing some tenure stream faculty to have a greater teaching load in the BA.
2. **Administrative support.** Through reorganization of existing support staff due to the closing of our site-based BEd program model, we do not anticipate any difficulties providing administrative support to the BA. Additionally, our student programs office will be handling half as many admissions to the new two-year BEd annually which will result in some extra capacity to handle admissions to the BA.
3. **Experiential learning support.** A key component of the BA will be experiential placements in the community. We do not anticipate difficulties in placing BA students because of our long-established experience of placing students in community settings which is a prerequisite to school practicum component of BEd program. Moreover, last year we developed an information system for managing school practicum placements which has significantly reduced the costs of administering them. The next upgrade of the system will allow it to handle community placements as well. In the first few years of the BA program we expect that existing BEd staff will be able to manage BA placements, however as the program expands we may need to hire a 0.5 staff person.
4. **Physical space.** Some of the classroom space needs of the program can be absorbed by more efficient utilization of the Faculty's existing dedicated classroom space. BA students will take several elective courses that BEd students take and some BA courses will be offered fully online which will further reduce classroom space demands. Nevertheless, beyond the first year we estimate that there will be a need the equivalent of two to three dedicated classrooms that hold up to 50 students. As the program grows and additional faculty are hired, offices to accommodate new faculty members will also be required.
5. **Information technology.** The Information and Learning Technologies team in the Faculty of Education currently supports faculty members and instructors in the Undergraduate, Graduate and Professional Development programs in the use of Moodle. As a result of a realignment of roles and responsibilities within the Faculty, an Educational Developer will be joining the team shortly to support faculty members and instructors to enhance their online teaching practice. Although the current team is in a

position to provide support to the BA program with this new position we can ensure that the support will be of the highest caliber.

In conclusion, I believe that this new program is vital to sustaining the Faculty of Education in the long term. We have every indication that the program will attract a sufficiently high number of students to generate additional revenue and require a modest amount of new resources. I wholeheartedly support its approval.



YORK UNIVERSITY
LIBRARIES

Scott Library
Research & Collections

4700 Keele St.
Toronto, ON
Canada M3J 1P3

416.736.2100 x22798
pwarren@yorku.ca



Memo

To: Dr. Sharon Murphy, Faculty of Education

From: Peggy Warren, Liaison Librarian – Education
York University Libraries

Date: 10 October 2014

Subject: Library Statement in support of new B.A. in Educational Studies

Thank you for sharing the program brief outlining the new Bachelor of Arts degree in Educational Studies, offered by the Faculty of Education. I have read the brief and have reviewed the 36 courses comprising the Faculty's proposed new program, paying particular attention to the 19 new course proposals and bibliographies. Most of the materials listed in these course bibliographies are currently held in York University Libraries in print or digital formats, or are available as open-access web documents. Any books that are missing (with the exception of undergraduate textbooks) will be ordered now, if still available for purchase.

York University Libraries currently supports graduate study in education at both the masters and doctoral levels. The Libraries collections in education and its related fields are extensive and have been built over many years. In addition to its print and e-book collections, the Libraries subscribe to over 80,500 e-journals (and another 4500 print-only journals), as well as over 450 scholarly databases, including specialized databases in education (e.g., *ERIC*, *Education Abstracts*, *CBCA Education*, *The Australian Education Index*) and in related disciplines (e.g., *Sociological Abstracts*, *PsycINFO*, *Social Sciences Abstracts*, to name just a few). Multidisciplinary databases (e.g., *Web of Science*) are also useful to researchers in education. Students registered in this new undergraduate program have access to multimedia materials, including a healthy film library collection, as well as data, statistics & maps, and government documents & policy studies pertaining to education. The Libraries' collections are particularly strong in social sciences. In addition to the Liaison Librarian in Education, several librarians acquire materials in areas of interest to students in educational studies. Students are most welcome to use the resources of all campus libraries at York.

A member in good standing of the Association of Research Libraries, York Libraries offer both collections and services to underpin this new program of study. Instructors in this new program may wish to consider taking advantage of the Libraries various resources intended to help students build their information literacy skills, a key component of the academic literacies they need to develop to complete their degree successfully. The Libraries offer a number of workshops, online tutorials (e.g., *SPARK – Student Paper & Academic Research Kit*), and library research guides in each program of study at York (e.g., researchguides.yorku.ca/education). Librarians are available to lead course-specific workshops geared to major assignments, designed in collaboration with a course instructor and embedded in the course curriculum.

York University Libraries is well able to support this new undergraduate Bachelor of Arts program in Educational Studies and will continue to build its collections in this area.



**OFFICE OF THE
UNIVERSITY
REGISTRAR**

Bennett Centre for
Student Services
4700 Keele Street
Toronto Ontario
Canada M3J 1P3
Tel 416.736.5262
Fax 416.650.8124

Memorandum

To: Professor Sharon Murphy, Faculty of Education
Date: January 16, 2015
From: Don Hunt, University Registrar
Subject: Proposal for a Bachelor of Arts (Honours) in Educational Studies

I am writing in response to the proposal as noted above.

The Registrar's Office supports a Bachelor of Arts (Honours) in Educational Studies

We look forward to working collaboratively through any implementation challenges not foreseen in the review of this proposal.

Thank you for the opportunity to review and comment.

Don Hunt
York University
University Registrar
phone: 416-736-2100 ext 70704
fax: 416-650-8124
Partners in Student Success



FACULTY OF
LIBERAL ARTS &
PROFESSIONAL
STUDIES

Office of the Dean

S-949 Ross Bldg

Tel. 416.736-5220

Fax. 416.736-5750

Memorandum

To: Whom It May Concern

From: Kim Michasiw,
Vice Dean

Date: January 21, 2015

Subject: Approval of a New Bachelor of Arts (Honours) Program in
Educational Studies.

On behalf of Martin Singer, Dean of the Faculty of Liberal Arts & Professional Studies, I have reviewed the proposal from the Faculty of Education for its new Bachelor of Arts (Honours) program in Educational Studies.

First allow me to applaud the proposal's proponents for the diligence and care taken with the document. The cases made for need and demand are unassailable, and case made for the program's distinctiveness--if not uniqueness--in North America is compelling (though one does wonder why this continent has lagged so far behind the UK). I am also struck by the various data attesting to the relations between a degree in Education Studies and such burgeoning and highly novel career categories as "educational developer" and "learning specialist." The proposal's identification of an "emergent" field, and its match of this emergence with such emergent pedagogies as experiential education and blended learning are both of this moment and forward looking. One has the sense that the university sector is often behind the axiomatic curve when it comes to changes in the employment landscape; this proposal appears to be an exception to that general case.

From the perspective of LA&PS, the new degree, especially in its Minor (or second Major) variation, will offer students in many of our programs a professionalizing advantage--or, as the proposal puts it, will allow them "to leverage their position in the job market--they will not find among the offerings of other Ontario universities. The comparatively modest credit weight of the Major (42) allows prospective students considerable latitude in integrating the BA (Ed) requirements with other degree requirements. The structure of the degree requirements also allows students to pick up the Major



of the Minor well into their studies at York. As the proposal suggests, “the program design offers students maximum flexibility in choosing how they wish to situate their knowledge of education in relation to a disciplinary field and in relation to their . . . professional goals.” Such flexibility will be much appreciated by LA&PS students and will work very much to their advantage.

Perhaps the greatest appeal of the program is its promise for future development: “As the program grows in size, unique concentrations . . . may emerge and the program can be adapted to provide studies in those concentrations.” I look forward to seeing how and where those concentrations develop.

For the near term, the enrolment projections appear modest and achievable, though I suspect that there may be more of a market for the Minor than the proponents anticipate.

I take this to be a path-breaking project, one that will be of benefit both to the Faculty of Education and to such colleague Faculties as LA&PS. I strongly support the initiative and trust others will as well.



**FACULTY OF
LIBERAL ARTS &
PROFESSIONAL STUDIES**

**Department of
Social Science**

Office of the Chair

4700 KEELE ST.
TORONTO ON
CANADA M3J 1P3

November 5, 2014

Dear Dean Singer:

On behalf of the Department of Social Science it is my pleasure to indicate support for the Faculty of Education's proposal for a BA in Education Studies. I think that the program as outlined will serve an interest amongst potential students in the field of education. I was delighted to be consulted on the proposal.

After consultation with Social Science's Undergraduate Program Director we do not see this program competing with any other existing programs, nor do we see any resource implications from Social Science in the proposal.

I also believe that a number of our students, especially in the Interdisciplinary Social Science Degree Program, would be interested in taking advantage of this program as a minor option.

I hope you will contact me if you have any further questions or concerns.

A handwritten signature in black ink, appearing to read "J.J. McMurtry".

J.J. McMurtry
Chair of Social Science



Toronto, 12 November 2014

Professor Sharon Murphy
Faculty of Education
York University

Re: Support for the new Educational Studies Degree

Dear Professor Murphy,

On behalf of the History Department, it is my pleasure to inform you that we support this new academic initiative. I believe that the new Educational Studies Degree will benefit our undergraduate students, including those who are pursuing or plan to pursue a degree in History.

I looked at the documents that you sent to me, and I can assure you that the new Educational Studies Degree is very promising, and will not compete with our program. On the contrary, the history department would offer courses that could complement this new initiative. We could offer new courses that focus on the history of education. I can assure you that we will be able to reserve spaces in courses that interest students who will enroll in the Educational Studies Degree. Also, some current or future History Majors may be interested in taking a double major or minor in Educational Studies. Until recently, many History Majors have pursued a concurrent or consecutive program in education. However, there is a decline in undergraduate numbers. This decline reflects the fact that fewer students are selected History as a Major, partly because of the bleak job market for teachers. Furthermore, the Ontario government's decision to cut admission to faculties of Education by 50% by 2015 has already affected undergraduate enrolment in History. The new Educational Studies initiative may convince students to pursue a major or a minor in History.

I would like to thank you for your invitation to support this new academic initiative.

Sincerely,

Marcel Martel
Professor and Chair

FACULTY OF
LIBERAL ARTS &
PROFESSIONAL
STUDIES

Department of History

2140 Varsity Hall
4700 Keele St.
Toronto ON
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**FACULTY OF
LIBERAL ARTS &
PROFESSIONAL STUDIES**

**Department of
Humanities**

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4700 KEELE ST.
TORONTO ON
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T 416 736 5158
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lapshuma@yorku.ca
www.yorku.ca/laps/huma

TO: Sharon Murphy, Professor, Faculty of Education
213 Winters College

FROM: Martin Lockshin, Professor and Chair, Department of Humanities
206 Vanier College

RE: Educational Studies proposal

DATE: November 11, 2014

On behalf of the Department of Humanities, I can attest that we were consulted about this proposal and we hereby express our support.

Best of luck with this proposal.

A handwritten signature in blue ink, appearing to read "M. Lockshin".

Martin Lockshin
Chair, Humanities

P.S. I understand that you have also received a separate communication for the Children's Studies program that is housed in our department.

cc: Ron Owston, Dean, Faculty of Education
242 Winters College



Children's Studies Program
Department of Humanities
Faculty of Liberal Arts & Professional Studies
209 Vanier College
York University



November 10, 2014

Re: Proposed Faculty of Education "Educational Studies" Honours BA

Professor Ron Owston
Dean & University Professor
Faculty of Education
York University

Dear Dean Owston:

The Children's Studies Program in the Department of Humanities, Faculty of Liberal Arts & Professional Studies, has been consulted on the proposed Honours BA in Educational Studies in May and October 2014.

To avoid possible student confusion between the proposed Educational Studies Honours BA and the existing Children's Studies Honours BA, particularly since there are overlaps, especially in some projected career goals between the two programs ("community, NGO, cultural, and other sectors"), each program will need to communicate to students explicit distinctions between the two, namely, that Educational Studies focuses on education, but not primarily or exclusively on issues related to children and youth, while Children's Studies focuses on children and youth, but not primarily or exclusively on education.

The Children's Studies Program consistently advises students that it is not a professional training program, and that it is specifically not a teacher training program, but that its studies should usefully complement everyone who works with children and youth, whether as pediatricians, lawyers, advocates, teachers, social workers, or artists. No doubt the Educational Studies Program will similarly need to distinguish carefully between its BA in Educational Studies and the Faculty of Education's Bachelor of Education programs.

Our suggested description of the Children's Studies Program for the purposes of this proposal is:

"Within York University, the interdisciplinary Children's Studies Program, in the Department of Humanities, in the Faculty of Liberal Arts & Professional Studies, studies children and youth;

children's rights; children's and youth cultures; children's learning inside and outside of schools; children's play and work; children's identities and socialization, including in institutional sites such as home, family, and school; and children's voices, perspectives, and agency."

Because of significant overlaps between a couple of proposed courses, course credit exclusions will be required between: (a) HUMA 3695 6.0 "Listening to Children: Ethics and Methodology of Child-Centered Studies" and ED/EDST 4500 3.0 "Ethics and Educating in Community and Work Contexts" [a new course proposal] and (b) HUMA 3694 3.0 "Contemporary Childhoods: Theories, Policies, Stereotypes" and both ED/EDST 3400 3.0, "Policy and Public Educational Institutions" [a new course proposal] and ED 4300, "Policy and Practice" [a new course proposal].

Children's Studies does not have a huge number of students taking a second major or minor. Based on a 2013 survey of our students, about 9% of our students take a double major, while 7% add a minor to their CHST major. That being said, those students have chosen a wide variety of second majors or minors. Some CHST students, therefore, might well choose Educational Studies as a second major or minor area of study.

Sincerely,

Peter Cumming
Coordinator, *Children's Studies Program*
On behalf of Humanities/Children's Studies Fulltime Faculty Members



Dr. Ron Owston
Dean, Faculty of Education
December 5, 2014

Dear Dr. Owston,

**FACULTY OF
LIBERAL ARTS &
PROFESSIONAL STUDIES**

School of Social Work

5880 ROSS BLDG.
4700 KEELE ST.
TORONTO ON
CANADA M3J 1P3
T 416 736 5226
F 416 650 3861
lapssowk@yorku.ca

Re: Support for Educational Studies Degree Proposal

On behalf of the School of Social Work, I am very pleased to write a letter of support for the Faculty of Education's proposed Educational Studies degree. For our social work students, a minor in Education Studies would be a most appealing option in fulfilment of the non-social work elective requirements of their BSW program. I say this because our students are often drawn to social work practice in relationship to education, whether in schools, after-school programs, newcomer services, or other community initiatives.

Last year Dr. Sharon Murphy from your Faculty met with Dr. Atsuko Matsuoka, our Undergraduate Program Director, and myself to discuss the proposed Educational Studies degree. We were both very enthusiastic about the courses that this degree would make available to our students and about the potential for them to be able have a minor in Educational Studies to their credit when applying for social work positions. I subsequently brought this proposal to our October Faculty Meeting and our colleagues too thought that the initiation of such an Educational Studies degree would be greatly appreciated by social work students.

This minor not only does not compete with any of our honours BSW programs, it very much complements what we offer in the way of professional studies. We would certainly make our BSW students aware of this option and encourage them to consider it. I would anticipate that a minor in Education Studies would be taken up by at least 10-15% of our BSW students, of whom we admit approximately 150 per year into our direct entry programs.

I wish the Faculty of Education success with the approval of this exciting initiative and look forward to soon being able to apprise our students of this valuable option for their professional education.

Sincerely,

Barbara Heron

Barbara Heron, Ph.D.
Associate Professor
Director, School of Social Work





FACULTY OF HEALTH

**Office of the Chair
Department of
Psychology**

4700 Keele St.
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www.psych.yorku.ca

Professor Sharon Murphy
Faculty of Education
213 Winters College
York University
4700 Keele St., Toronto, ON
Canada M3J 1P3

November 13 2014

Re: BA Educational Studies

Dear Professor Murphy,

I am pleased to write this letter of support for the proposed Educational Studies Bachelor's degree program.

This proposal fills an important gap in our university's curriculum offerings to undergraduate students who wish to study education but do not wish to obtain formal teaching certification. For example, this could be provide a valuable opportunity for psychology majors who might be interested in a minor area in Educational Studies. Our department was consulted in this initiative which is a forward-looking one.

I do not see the Educational Studies program as competing with our existing undergraduate programs but rather very much as complementary, such as bolstering the pedagogy for those students interested in psycho-educational interventions.

I congratulate Professor Murphy and her colleagues on their efforts in developing this proposal which has the potential to appeal to a new and different group of incoming student recruits, both out of high school (101) but also those who are older or trying again at university studies (105) and I support their initiative.

Please call me or email me if you have any questions. You can reach me at: jgoldber@yorku.ca

Sincerely,

A handwritten signature in cursive script that reads "Joel Goldberg".

Joel O. Goldberg, PhD, CPsych
Chair & Associate Professor,
Department of Psychology,
York University





**FACULTY OF
LIBERAL ARTS &
PROFESSIONAL STUDIES**

**Department of
Languages, Literatures
and Linguistics**

4700 KEELE ST.
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T 416 736 5016
F 416 736 5483

November 17, 2014

Professor Sharon Murphy
Faculty of Education
York University

Re: Support for the proposed Educational Studies Degree Program

Dear Professor Murphy,

I am happy to write this letter of support for the proposed degree program in Educational Studies in the Faculty of Education. As the Director of Undergraduate Program, Linguistics, I was consulted on this important initiative.

This program does not compete with our undergraduate program in any way; in fact, in many ways it complements our program. Many of our students in linguistics are interested in language pedagogy, both as it relates to the teaching of children and of adults learning a second language. In fact, our program houses a certificate in Teaching English to Speakers of Other Languages (TESOL) and we offer courses in first and second language acquisition. I can well imagine that many of our students would be interested in combining their program in Linguistics with Educational Studies, either as a double major or major/minor. In addition, we have a variety of courses that may appeal to students who choose Educational Studies as their major or minor.

In sum, I feel that this program fills a gap in York's curricular offerings; it allows students to study education without having to pursue formal teaching certification. Should you require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Susan Ehrlich".

Susan Ehrlich
Professor and Director, Undergraduate Program in Linguistics



**Appendix A : Calendar Copy of Program
Requirements**

PROGRAM REQUIREMENTS

Note: Major/Minor courses may only count for Major or Minor credit towards one Major or Minor.

Note: Courses taken for a B.A. (Educational Studies) do not lead to teacher certification.

HONOURS (MAJOR) BA PROGRAM

Educational Studies may be pursued as an Honours Major Bachelor's degree program in the Faculty of Education. Courses taken to meet the Educational Studies requirements cannot also be used to meet the requirements of other degree or diploma programs in which the student is simultaneously registered. Students must complete at least 42 credits in Educational Studies including:

- ED/EDST 1000 3.0 What Is Education For?
- ED/EDST 1100 3.0 Situated Learning and Education
- ED/EDST 1200 3.0 Place and Learning
- ED/EDST 3999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context
- ED/EDST 4999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context

Students must also complete a minimum of 9 credits from each of Course Lists 1, 2 and 3.

Residency Requirement: A minimum of 30 course credits, and at least half (50 percent) of the course credits required in each undergraduate degree program major/minor, must be taken at York University.

Graduation Requirement: All graduates must complete a total of at least 120 credits, with a minimum overall cumulative grade point average of 5.00 (C+)

General Education: All graduates must complete a total of 21 general education credits with a minimum of 6 credits from three of the following four areas: a) humanities, b) modes of reasoning, c) natural science, and d) social science at the 1000 or 2000 level [1000 level for natural science

It is strongly recommended that students complete the general education requirements within their first 54 credits.

HONOURS (DOUBLE MAJOR) BA PROGRAM

Educational Studies may be pursued jointly with any other Honours Bachelor's of Arts Degree program or with a Bachelor's of Social Work. Courses taken to meet the Educational Studies requirements cannot also be used to meet the requirements of the other Honours Bachelor's degree program, nor can they be also used to meet the requirements of a Bachelor of Education degree.

Students must complete at least 42 credits in Education, including:

- ED/EDST 1000 3.0 What Is Education For?
- ED/EDST 1100 3.0 Situated Learning and Education

- ED/EDST 1200 3.0 Place and Learning
- ED/EDST 3999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context
- ED/EDST 4999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context

Students must also complete a minimum of 9 credits from each of Course Lists 1, 2, and 3.

Residency Requirement: A minimum of 30 course credits, and at least half (50 percent) of the course credits required in each undergraduate degree program major/minor, must be taken at York University.

Graduation Requirement: All graduates must complete a total of at least 120 credits, with a minimum overall cumulative grade point average of 5.00 (C+)

General Education: All graduates must complete a total of 21 general education credits with a minimum of 6 credits from three of the following four areas: a) humanities, b) modes of reasoning, c) natural science, and d) social science at the 1000 or 2000 level [1000 level for natural science

It is strongly recommended that students complete the general education requirements within their first 54 credits.

HONOURS (MINOR) BA PROGRAM

A Minor in Educational Studies may be pursued jointly with any Honours Major Bachelor of Arts degree program. Courses taken to meet the Educational Studies requirements cannot also be used to meet the requirements of the Honours Major degree program.

Students must complete 30 credits in Educational Studies including:

- ED/EDST 1000 3.0 What Is Education For?
- ED/EDST 1100 3.0 Situated Learning and Education
- ED/EDST 1200 3.0 Place and Learning
- ED/EDST 3999 3.0 Experience, Inquire, Contribute (EIC): Learning in Context

Students must also complete a minimum of 6 credits from each of Course Lists 1, 2 and 3.

List 1 Engagements

- ED/EDUC 2300 3.0 Pedagogy of the Land
- ED/EDUC 2400 3.0 Education as Communication
- ED/EDST 2450 3.0 Multilingualism and Multiculturalism in Educational Contexts
- ED/EDUC 2720 3.0 Teaching English in International Contexts
- ED/EDUC 3600 3.0 Literacy and Culture
- ED/EDUC 3610 3.0 New Media Literacies and Culture
- ED/EDUC 3720 3.0 Critical Thinking
- ED/EDUC 3750 3.0 Educational Assessment
- ED/EDUC 3760 3.0 Early and Family Literacy

- ED/EDUC 3770 3.0 Teaching and Learning with Digital Technology
- ED/EDST 4010 3.0 Educating for Activism
- ED/EDST 4100 3.0 Theories, Strategies, and Challenges of Group Work

List 2 Representations

- ED/EDST 2500 3.0 Cultural Representations of Education
- ED/EDST 3100 3.0 Recreation and Education
- ED/EDST 3200 3.0 Apprenticeship Learning and Learning Communities
- ED/EDST 3400 3.0 Policy and Public Educational Institutions
- ED/EDST 3800 3.0 Research Methods in Educational Studies **[Required]**
- ED/EDST 3900 3.0 Studies in Popular Culture
- ED/EDST 4000 3.0 Community Organizations and Education
- ED/EDST 4040 3.0 The Nature and Responsibility of Professional Practice
- ED/EDST 4200 3.0 Creating Curriculum

List 3 Values

- ED/EDUC 2200 3.0 Issues in Indigenous Education
- ED/EDUC 2700 3.0 Teaching Internationally and Interculturally
- ED/EDUC 3300 3.0 Urban Education
- ED/EDUC 3500 3.0 Inclusive Education
- ED/EDUC 3650 3.0 The Psychoanalysis of Teaching and Learning
- ED/EDUC 3700 3.0 Educating for a Sustainable Future
- ED/EDUC 3710 3.0 Global Issues and Education
- ED/EDUC 3730 3.0 Education and Human Rights
- ED/EDUC 3910 3.0 Reflecting on and Interpreting the International Educational Experience
- ED/EDST 4020 3.0 The Politics of Social Transformation: Studies of Great and Not-So-Great Educators
- ED/EDST 4300 3.0 Policy and Practice
- ED/EDST 4500 3.0 Ethics and Educating in Community and Work Contexts

Appendix C: Letters of Support from Community Agencies



November 1, 2014

Dr. Ron Owston.
Dean, Faculty of Education
York University.
4700 Keele Street
North York, Ont
M3J 1P3, CANADA.

Dear Dr. Owston

This letter acknowledges that we at Spectrum Health Care, a leader in health care services in Ontario, would be interested in working with York University's Faculty of Education to examine ways and means to accept student(s) from your new Bachelor of Arts in Education Degree as either interns or as cooperative education students. In the ever evolving world of health care, assisting our firm with assessing future educational needs of our employees, suggesting training models, creating attainable education goals and outcomes within our current business model would be deemed an asset.

We look forward to the discussion.

Yours Truly,

A handwritten signature in blue ink, appearing to read "Lori Lord".

Lori Lord
C.E.O.



October 29, 2014

Ron Owston, Dean of Education
York University
4700 Keele Street
Toronto, Ontario, M3J 1P3

Dear Ron:

What a pleasure to provide a letter of support for what is undoubtedly a pioneering Bachelor of Educational Studies at my alma mater, York University. Ever the innovator, the proposed York U Bachelor degree will educate, inspire and engage teachers academically and professionally for a broad range of non-school educational careers in human services, public policy and social agencies.

United Way is, in communities across Canada, the largest funder of human and social services next to government. In York Region, we support a formal network of over 75 frontline programs delivered by 41 agency partners; last year, 120,270 people got the help they needed, in their neighbourhood, thanks to United Way. And yet, day in and day out, we see and hear that the need and demand for services is outpacing the supply: a youth in crisis will wait 6 to 9 months for a mental health counsellor; 5000 people were turned away from our only shelter last year. Clearly, we cannot social service, charity or fundraise our way out of our region's deepening social issues. New, innovative approaches are required – and I believe your proposed Bachelor of Educational Studies is a potential change strategy.

Over the last few years, in fact, much of our work at United Way has focused on building civic muscle, listening to and investing in everyday people working on local solutions. In partnership with York University, we launched a region-wide Meeting House series, bringing residents together in each of our nine municipalities. Our findings inspired us to fund Strength Investments, catalytic support for residents, community groups and business coming together to solve neighbourhood challenges with local assets. Over the last five years, our investments of \$300,000 have leveraged close to \$3M worth of new funding and supports for communities across our region.

Your proposed commitment to an on-the-ground Bachelor of Educational Studies unleashes some of our youngest and brightest minds into their communities; it connects their theoretical and academic learnings to some of our region's emerging lived realities – and we are all the better for it. For the students, of course, the proposed placements would connect them directly to local issues, a living laboratory if you wish, and an opportunity for them to see that, no matter how messy, the answer is always in community – people working together. For our communities, the proposed placements offer brilliant minds, eager hands and committed hearts – gifts and assets to leverage solutions today and into the future.

Suffice to say, I am inspired by the opportunities inherent in the proposed Bachelor of Educational Studies, for United Way, our agency partners and the community at large. Know our support is always a phone call or email away.

Honoured to partner with York University,

A handwritten signature in black ink, appearing to read "Daniele Zanotti". The signature is stylized with a large "D" and "Z".

Daniele Zanotti
CEO

United Way York Region
Change starts here.
80F Centurian Drive, Suite 200, Markham, ON L3R 8C1
905-474-9974
york.unitedway.ca



PENMAR AUTOMATION INC.

1151 Gorham Street, Unit 18, Newmarket, ON. L3Y 8Y1

Office: (905) 836-8103

Fax: (905) 895-0364

November 6th, 2014

Dr. Ron Owston
Dean, Faculty of Education
York University
4700 Keele Street
North York, Ontario
M3J 1P3, CANADA

Dear Dr. Owston,

This letter acknowledges that we at Penmar Automation, an international automation firm, would be interested in working with York University's Faculty of Education to examine ways and means to accept student(s) from your new Bachelor of Arts in Education Degree as either interns or as cooperative education students.

In the high tech world that we currently exist in, assisting us in assessing future educational needs of our employees, suggesting training models, creating attainable education goals and outcomes and implementing training models within our current business model, would be deemed an asset.

We look forward to the discussion.

Regards,

Marika Misener
Operations Manager
Penmar Automation Inc.
Tel: 905-836-8103
Fax: 905-895-0364
Email: Marika@penmarautomation.com

**York University Quality Assurance Procedures
New Program Appraisal**

**External Appraisal Report on the Proposed New
Bachelor of Arts in Educational Studies**

Please provide feedback, as appropriate, on the evaluation criteria provided below.

External Reviewer: Dr. Janet Groen, Associate Professor and Chair in Adult Learning, Werklund School of Education, University of Calgary, Calgary, Alberta

- 1. Outline of the Visit:** Below is the proposed itinerary of my on-site visit. It accurately reflects the meetings and events that occurred. I only add details to the meeting with potential students.

New Program - BA in Educational Studies Friday, January 9, 2015 External Reviewer (Dr. Janet Groen)	
Time	Meeting
9:00 – 9:45 AM	Vice-Provost Academic Dr. Alice Pitt Location: Schulich Dining Room
10:00 – 11:00 AM	Meeting with Dean Ron Owston, Associate Dean Lyndon Martin Location: 242 Winters College (Dean’s Office)
11:00 am – 12:00 PM	Meeting of faculty (Sharon Murphy, John Ippolito, Robert Wager, Neita Israelite, Lisa Farley, Roopa Desai Trilokekar, Heather Lotherington) Location: 286C Winters College
12:00 – 1:00 PM	Lunch with potential students: <i>18 students attended this meeting. In attendance were a mix of high school students, university and college students, recently graduated college and university students, and representatives from the Peel Youth program and some community-based organizations.</i> Location: 283B Winters College
1:00 – 2:00 PM	Meeting with Community Placement Leaders (Janice Chu, Chris Penrose, Marcela Duran, Sharon Murphy) Location: 242 Winters College (Dean’s Office)
2:00 – 2:30 PM	Meeting with Education Librarian, Peggy Warren Location: 310J Scott Library

2:30 – 3:00 PM	Tour of Education Resource Centre, Computer Lab (Coordinator: Ana Uzelac) Location: 3144 TEL Building
3:00 – 3:30 PM	Meeting with Professor Chloe Brushwood Rose, Professor Sue Winton (Chair of Committee for Curriculum, Teaching & Learning) Location: 286C Winters College
3:30 – 4:00 PM	Closing meeting with Dean Ron Owston and Sharon Murphy Location: 242 Winters College (Dean's Office)

2. General Objectives of the Program

- *Is/are the program name and degree designation(s) appropriate?*

The Bachelor of Arts in Educational Studies is the appropriate program name and degree designation. Both the name and the degree designation signal that this is an area of studies distinct from the traditional Bachelor of Education program and degree designation, which typically leads to certification to teach within traditional kindergarten to grade twelve educational contexts.

While the BA in Educational Studies is new to the Canadian university context, this type of degree is available in the UK and is increasingly in demand. A quick review of some programs like this in the UK (see programs at Canterbury Christchurch University <http://www.canterbury.ac.uk/study-here/courses/undergraduate/education-studies.aspx> and University College London - http://www.ioe.ac.uk/study/IBAS_EDS99F.html) reinforce that this program's name and degree designation will afford it international recognition.

- *Are the general objectives of the program clear and are they consistent with University and Faculty missions and academic plans?*

The general objectives of the program are clear and reinforce the central idea that this program is distinct from the B.Ed. program. As well, the objectives indicate that this program will not only offer foundational knowledge and skills regarding the significant role of educational within in our society, but it will also develop the students' skills so they are able to engage in educational work beyond the traditional kindergarten to grade twelve educational contexts. Given students' concerns, as evidenced during the lunchtime meeting I had with several potential applicants, regarding the potential of this degree to translate into job opportunities, it is important that this program not only cultivates foundational knowledge and skills, but also develops these more concrete skills. This dual purpose is reflected in the general objectives.

As well, as indicated in the written report and in various conversations held with stakeholders, the objectives of this program are aligned with York University's strengths within the liberal arts and professional studies programs. In particular, both the Faculty

of Education and York University see community collaboration, experiential learning and social engagement as central to their mission, which are all reflected in the general objectives and program design of this new BA. Indeed, the Faculty of Education is ideally positioned to launch this new program because of its extensive work in community education as evidenced through the York Centre for Education and the Community and the solid collaborative relationships it holds with several other faculties across the university. I appreciate that this program, in alignment with the University Academic Plan's goal of 'supporting innovative and flexible curriculum delivery', is not only incorporating a blended format in its course offerings, but that it also features as highly experiential approach to its program design.

3. Need and Demand

- *Is there sufficient explanation of need/demand for the program?*

Both the report and comments from various stakeholders I met during my on-site visit were able to convincingly argue that there is an emerging need for this program. While they readily admit that society's first association with an education degree is typically associated with the B.Ed. program that allows one to teach within the traditional k-12 system, they offer compelling evidence that this new program reflects the realization that learning occurs across the lifespan and within multiple settings, both within formal and increasingly informal contexts. On a practical level, York University is being strategic in creating this program, as there is increased recognition that the province of Ontario is graduating far too many people from their B.Ed. programs.

Initially, I anticipate that the majority of applicants to this program would come from students, attending York University, who would like to have a minor or a double major in educational studies. As both the faculty members and potential students indicated, it is easy to make a compelling case for the advantages of having a major in one of the liberal arts/professional programs, alongside a minor/double major in this program. Given the Faculty of Education's existing strong association with many of the departments in the Faculty of Arts, as well as a ready pool of applicants already enrolled in the community education certificate via the YCEC, as well as the Child Studies program, it will be relatively easy to market the potential of this new program within the internal university setting.

During the lunch time meeting with potential students, it became apparent that resources will need to be devoted to marketing this new BA program outside the university setting. At the high-school level, particularly through guidance counselors, and with potential employers (health care, non-profit agencies, the private sector), a plan needs to be developed and launched 'to educate' people about the basic tenets of this new BA and the value of this degree within the marketplace. Indeed that was the key focus of the discussion with potential students – "This sounds like a great degree, but what can I do with it? Would potential employers understand this degree and will it give me an advantage in this competitive job market?" In summary, a strong marketing plan that relies on a multi-media approach will play a key role in demonstrating the need for this program and, in turn, building up a strong demand for this new degree. In particular, capturing the testimonials of community leaders as they argue for the importance of this

program could be very valuable as evidenced by the convincing arguments for the high value of this program I heard from my meeting with them.

Please note that undergraduate programs in adult education do not exist at the University of Calgary or at OISE (these are both graduate programs in adult education).

4. Program Content and Curriculum

- *Does the curriculum reflect the current state of the discipline or area of study? If applicable, comment on the appropriateness of any unique curriculum or program innovations or creative components.*

I would like to commend the designers of this new BA in Educational Studies, as they have created a program based upon a strong and relevant theoretical and experiential framework. Specifically all course offerings fall into three topical areas: “*Engagements* – focused on the development of professional skills, *Values* – focused on who and why we educate, and *Representations* – focused on understanding the idea of education” (p. 12). In turn, featured particularly in years three and four of the program, the experiential component, which “situates studies in real world contexts” (p. 12) is also based on a clear and relevant framework: experience, inquire, and contribute (EIC). I also support the argument that creating a curriculum that is deliberately recursive is important as the students, required to take an equal number of courses in all three areas to meet degree requirements, will be able to understand and experience the complex and interdisciplinary nature of education.

On a practical level, I appreciate that many of the courses within this program are taken from existing elective B.Ed. courses that already have an Educational Studies focus, particularly in the second year of this program. As a result, the strengths of the existing faculty will be taken up in this new program and it also eases the pathway to implementing this new program, as the bulk of the new course development does not need to occur until years three and four.

- *For undergraduate programs, comment on the appropriateness of the anticipated class sizes.*

Class sizes will be 45 to 50 students per class throughout the program, keeping it aligned with current class sizes within this Faculty of Education. While, in theory, there might a concern as to how all the students within this program will be placed within community settings in their third and fourth years of this program, the written report and my meeting within community placement leaders gives me every confidence that they will be able to successfully place all students in relevant and dynamic community settings.

5. Program Structure, Learning Outcomes and Assessment

- *Are the program requirements and learning outcomes clear, appropriate and in alignment with the relevant degree level expectations?*

York University has six undergraduate general degree expectations for all of their undergraduate programs: depth and breadth of knowledge, knowledge of methodologies, application of knowledge, communication skills, awareness of limits of knowledge and autonomy and professional capacity. The proposed BA in Educational Studies demonstrates a clear and convincing alignment with these six expectations at both a broader programmatic level and within each course in the program. Of particular note is the scaffolding nature of several courses so students can deeply engage with the experiential education courses in years three and four of the program. In particular, the research methods course and several courses that prepare students to understand the many ways that education is represented within society (recreation, apprenticeship learning, culture representations and public educational institutions) effectively position them to really engage and learn from their community placements.

- *Comment on the appropriateness of the program curriculum and structure to support the program learning outcomes. For undergraduate programs, comment on the nature and suitability of students' final-year academic achievement in the program.*

The program curriculum and structure is based on deeply informed theoretical and experiential framework that allows for the systematic development and realization of program learning outcomes. The first year of the program offers one course in each of the three major strands (V, E, and R) and in the second, third and fourth year of the program, students continue to study across these three strands. As well, in the third year, two courses – EDST 3999 *Experience, Contribute and Inquiry: Learning in Context* and EDST 3800 *Research Methods in Educational Studies* – begin the important task of consolidating learning across the three strands and creating a bridge from academic studies to experiential work and learning. The emphasis on consolidation is reinforced in the fourth year through the coursework and the final experiential course – EDST 4999 *Experience, Contribute and Inquire: Learning in Context*. EDST 3999 and EDST 4999 are absolutely essential in realizing the desired students' final years' academic achievement within the BA in Educational Studies, as evidenced in the expended course description: "This course is taken in the final year of study. The course offers students a second opportunity to engage in situated learning in a fieldwork site that engaged in educational work and is a culminating point for the degree".

- *Are the methods and criteria for assessing student achievement appropriate and effective relative to the program learning outcomes?*

The methods and criteria for assessing student achievement are both appropriate and effective, reflecting the theoretical and experiential nature of the program. The theoretical components are assessed in assignments that require students to prepare analytical, theoretical and conceptual essays, examinations, and presentations. I appreciate that there are also multiple opportunities to communicate concepts in multiple ways, beyond the traditional essay or presentation, such as video and arts based responses, which is more reflective of communication approaches that may be required of program graduates once they are working within varied contexts. As well, the assignments associated with the experiential courses in year three and four allow students to demonstrate their engagement in the field through the ongoing development of an educational studies portfolio, an assessment approach that we are also using in our undergraduate Bachelor of Education program. If the educational portfolio requires and

results in authentic engagement with the students and their key learning during these two experiential courses, it can be a very powerful assessment approach.

- *Comment on the appropriateness of the proposed mode(s) of delivery to meet the program learning outcomes.*

This program relies on a wide variety of delivery methods: blended delivery and face-to-face courses, face-to-face courses that depend on multiple platforms to cultivate the active engagement of students and finally, the strong field work component in this program as realized by the experiential learning courses in years three and four. The multiple pathways of delivery within this proposed BA reflect the changing nature of program delivery within post-secondary education. Perhaps in the future, this program might consider the option to also offer fully online delivery of their courses, allowing students to stay within their home communities and to possibly continue working if needed. I anticipate that this program could certainly appeal to mature students, who might find it almost impossible to quit their jobs but would still be very interested in this program.

6. Admission Requirements

- *Are the admission requirements appropriately aligned with the program learning outcomes?*
- *Is there sufficient explanation of any alternative requirements, if any, for admission into an undergraduate, graduate or second-entry program, such as minimum grade point average, additional languages or portfolios, along with how the program recognizes prior work or learning experience?*

The application requirements are appropriately aligned with the program learning outcomes. What is requested on the supplemental admissions form might be somewhat challenging for the potential applicant who is coming directly from secondary school, especially if they feel that they may not have an extensive employment history to and/or other experiences to draw from to demonstrate why they would be a suitable candidate for the program. I could certainly see that this supplementary form would appeal to the more mature applicant. It would be important to develop a supplementary admissions form that allows the recent high graduate to demonstrate how their experiences – such as volunteer experience and community engagement – could also make them a strong candidate for the program.

I appreciate that this program also has provided a pathway for students from alternative backgrounds to gain entry to this program. It is exciting that the Faculty of Education is also working with Seneca College to develop a degree pathway for students enrolled in their Human Services programs. Hopefully this pathway will be created with other programs at other colleges.

7. Resources

For all programs

- *Adequacy of the administrative unit's planned utilization of existing human, physical and financial resources, and any institutional commitment to supplement those resources, to support the program.*

The letter of support for the new BA in Educational Studies received from the Dean of Education at the York University, Dr. Ron Ownston, addressed many of these particular resource allocation concerns. Dr. Ownston offers convincing evidence that there are adequate numbers of faculty and staff, along with required physical and IT resources, to achieve the goals of this program, without adding financial strain to this faculty or university. As Dr. Ownston acknowledges, "the timing of this proposal is fortuitous because we will be able to mount the BA program partly through re-deployment of existing resources that will be freed up as a result of our new two-year Bed which will be offered beginning Fall 2015."

A resource area that might have been a concern – the experiential learning support needed for placements during years three and four of the program – was addressed during the meeting with personnel responsible for community placements. An information system for managing placements is already in place for school placements and this program can be easily upgraded to manage BA placements. As well, there is still a few years time to build up the needed additional number and range of community placements. Finally, the suggestion in a previous section of this report, that some of the initial success in recruiting potential students to this program will require a thoughtful marketing plan, has been acknowledged by Dr. Ownston and will be taken up in the larger marketing plan that is being developed to roll out the new two B.Ed. programs.

As well, I received letters of support for this new program from several relevant departments and professional programs at York University, including the following: Linguistics, Geography, Psychology, Social Work, the Children's Studies Program, Humanities, History, and Social Sciences. Everyone indicated that this program did not compete with each of their respective programs and did not have any resource implications. As well, many of the letters reflected a keen interest in this program, seeing this offering as complementary to their programs. Indeed many indicated that they would encourage their students to consider taking the BA in Educational Studies as a minor or a double major.

- *Appropriateness of the collective faculty expertise to contribute substantively to the program.*

Faculty members in the Faculty of Education at York University have both a national and international reputation for engaging in research that not only includes education within the K-12 system, but also explores community work, social engagement, adult education and policy. In addition, the ability to draw on a robust number of existing elective

courses within the current B.Ed. program, to reflect the diversity of values, engagements and representations within the broader education system, speaks well to the collective faculty's expertise to contribute substantively to the program.

- *Participation of a sufficient number and quality of faculty who are competent to teach and/or supervise in the program, including qualifications, research, innovation and scholarly record.*

Both the report and the support letter from Dr. Owston offer assurance that tenure stream faculty who are released from teaching in the B.Ed. program, due to restructuring, will be able to move into teaching in the new BA program as they all have the requisite qualifications and scholarly/research background to do so. As well, Dr. Owston has indicated that any potential new faculty positions, as a result of five retirements during 2014 and 2015, will take into consideration the needs of the new BA program.

- *Evidence that there are adequate resources (e.g. library, laboratory) to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities.*

My tour of the central library, along with the letter of support from York University Libraries, offered assurance that the students in the new BA in Educational Studies program will be well served. Because this Faculty of Education offers a graduate program, the library has extensive collections in education and related fields, such as those in the social sciences and professional programs. I do not anticipate that the BA students will draw significantly on the resources within the Education Resource Centre as most of the materials housed there appear to be directed toward students within the traditional B.Ed. program. Nothing within the program or during conversations during my on-site visit gave any indication that the mandate of Education Resource Centre would change as a result of this new BA program.

Additional criteria for undergraduate programs only

- *Evidence of and planning for adequate numbers and quality of: (a) faculty and staff to achieve the goals of the program; or (b) of plans and the commitment to provide the necessary resources in step with the implementation of the program; (c) planned/anticipated class sizes; (d) provision of supervision of experiential learning opportunities (if required); and (e) the role of adjunct and contract faculty.*

Please refer to my comments in the first section of "Resources".

8. Quality of Student Experience

- *Is the evidence of a program structure and faculty research that will ensure the intellectual quality of the student experience?*

In summary, I believe that my appraisal report reveals that there is a robust amount of evidence that the program structure of this new BA in Educational Studies and the faculty resources will ensure the intellectual quality of the student experience.

9. Other Issues

NA

10. Summary

As I come to the close of completing this external appraisal report for the proposed new BA in Educational Studies program, I would like to thank York University for this opportunity and for making it such a pleasurable experience. The practical planning aspects for this trip were done quickly and with ease and my day on campus was very worthwhile. All meetings were engaging and informative and quickly led me to realize that there was a tremendous level of support for this new program, not only within this faculty, but also across campus and within the surrounding community. As well, I would also like to acknowledge the tremendous work that was undertaken to create such an impressive new program brief. This program proposal is extremely well done, both theoretically grounded and structurally sound, which is not an easy task. It reflects the high level of sustained and attentive commitment over several years by many faculty members and leaders.

In conclusion, this proposed BA in Educational Studies within the Faculty of Education at York University is timely, providing a much needed university level response to the ever-expanding role of education within our society. As well, developing this new BA is a strategic and well-timed move for this faculty, given the changing landscape for B.Ed. programs in Ontario. Assuming you are successful in moving through all stages of the approval process, I wish you every success as you launch this new program. I will be watching with great interest. Congratulations to everyone on the team who contributed to the development of the new BA in Educational Studies at York University.



Dr. Janet Groen
Associate Professor and Chair of Adult Learning
Werklund School of Education
University of Calgary
Calgary, AB

January 19, 2015

York University
Schulich School of Business

**Proposal for a Graduate Diploma in
Advanced Accounting**

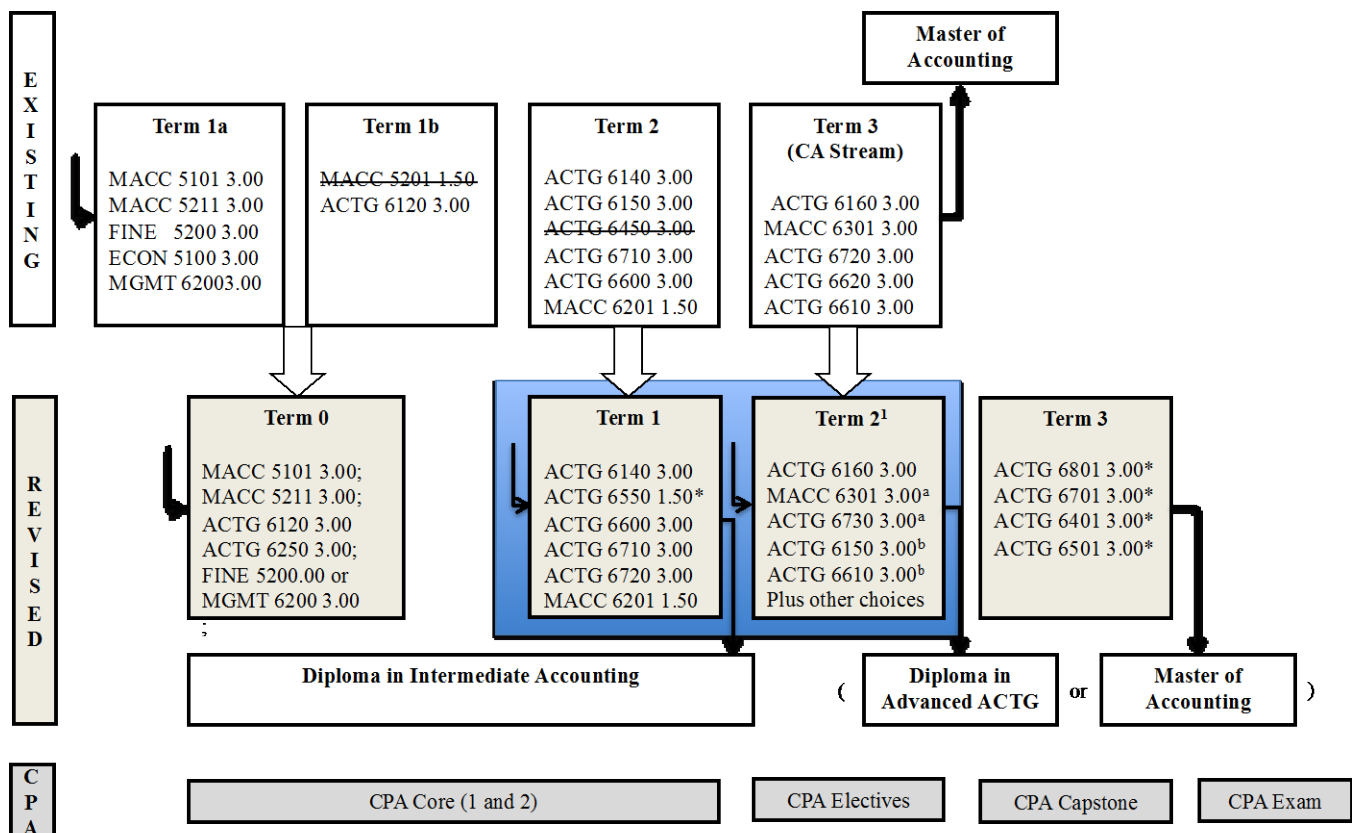
January 2015

Graduate Diploma in Advanced Accounting

1. Introduction

This is a proposal for a Graduate (Type 1) Diploma in Advanced Accounting (DAAC) – a professionally oriented graduate degree designed for students who wish to pursue studies leading to the Chartered Professional Accountant (CPA) designation. This proposal is part and parcel to a set of three proposals. The first asks to establish a two-semester Diploma in Intermediate Accounting (DIAC), which serves as an entry pathway to the MAcc for graduates from non-business and non-CPA-accredited business graduates. The second asks to change the structure and requirements of the currently existing Master of Accounting program. This proposal establishes a concurrent (type 1) Diploma in Advanced Accounting (DAAC) for MAcc student who elect to terminate their education after Term 2 instead of Term 3. Figure 1 shows an overview of the proposals in relation to the DAAC.

Figure 1: Overview of Schulich Accounting Proposals



Notes

1. Term 2 depicted here are the courses students would take if they elect the Assurance and Tax electives which are the specialized areas in the existing CA-accredited MAcc.

a Assurance Elective Course

b Tax elective Course

* New Course

— Course in the existing MAcc that will be retired

⬇ (Potential) Entry Point

⬆ (Potential) Exit Point

The Diploma will be administratively housed in the Accounting Area of the Schulich School of Business and will be awarded to students who after being admitted to the Master of Accounting degree (MAcc), elect to leave the program upon successful completion of Term 2 of the MAcc. As

Term 2 of the MAcc focuses on deepening the student's expertise in two fields of practice within the accountancy, granting a Diploma at this stage is appropriate and consistent with current practice in the field. The use of diplomas in Accounting education is pursued both at York University (e.g., LA&PS's Diploma in Professional Accounting) and at other universities in Ontario (e.g., Queens University).

2. General Objectives of the Graduate Diploma

The objective of the program is to develop students' academic and intellectual abilities in the core competency areas that constitute the field of accountancy and through the selection of electives, students will deepen their expertise in at least two fields of professional practice.

The objectives and design of the program directly address some of the critical themes of the University's Academic Plan. The program is academically rigorous, involving 30 credit hours over two terms. After completing the program, graduates will have acquired in-depth learning of all of the field's competency areas and will have acquired expertise in two fields of professional practice.

The program's heavy emphasis on applied case analysis is consistent with the University goal of experiential learning. Cases also develop students' critical thinking abilities and capacity to operate in decision environments characterized by high degrees of ambiguity. The entry requirements into the program are high (B average GPA and, 600+ minimum GMAT score) and will attract a high caliber of incoming students. As the program is accredited by CPA Canada, graduates will be able to take an accelerated path towards obtaining the most highly recognized professional accountancy credential in Canada, which in turn will provide a strong foundation for initial career placement and continuing long-term career trajectories.

3. Need and Demand

The need for this Diploma was inspired by changes in the organization of professional accountancy in Canada and its impact on the professional education program for Canada's accountants. In 2013, the CA and the CMA bodies amalgamated under the umbrella organization CPA Canada, creating a new professional designation - the Chartered Professional Accountants (CPA) ¹ which introduced two significant changes to the certification program for professional accountants. Firstly, there has been an expansion in the fields of expertise beyond the traditional areas of assurance and tax. Secondly, there has been a recalibration of the relative roles between the profession and academic programs in the education and training of professional accountants. That is whereas before academic programs were seen as merely providing the prerequisite learning for admission into the professional education program, under the new arrangement through the process of accreditation, some graduate programs are recognized for their ability to deliver all or part of the professional educational program. Whereas the Schulich School of Business re-designed its Master of Accounting program to incorporate both the added fields of expertise within the discipline and the areas of advanced accountancy education previously undertaken within the CPA's professional educational program, the new Diploma of Advanced Accounting that is being proposed aims to give students to option of accelerating their path towards professional certification without having to undertake a Masters degree. The Schulich

¹ In 2014 Canada's third recognized professional accounting body -the Certified General Accountants (CGA)- joined the unification scheme

Diploma of Advanced Accounting is accredited by CPA Canada and, once completed, graduates will be immediately eligible to enter into the Capstones phase of the professional education program.

The School of Administrative Studies (SAS) in the Faculty of LA&PS has submitted a proposal for a new Type 3 Graduate Diploma in Professional Accounting motivated by the same changes in the profession. The SAS diploma essentially covers what is offered in the Schulich Diploma in Advanced Accounting – that is, the specialized electives of the CPA program – albeit in a different fashion. Whilst the SAS diploma and the Schulich Diploma in Advanced Accounting do overlap, they will not compete as the Schulich Diploma in Advanced Accounting will attract students from a different market segment, and students benefit from completing the diploma in the Faculty in which they have completed their Undergraduate studies.

The primary targets of the Diploma in Advanced Accounting will be students graduating from the CPA stream of the Schulich BBA and iBBA programs, most of whom are expected to enroll into the Master of Accounting. Our expectation is that, in 2015, 70% of this group would terminate their studies at the Diploma stage but that this percentage will significantly decline over time with more students opting to complete the MAcc (as some of the Accounting courses in the undergraduate program will be retired). As such, the Diploma would allow Schulich to serve the graduates from the current version of its undergraduate programs.

4. Curriculum, Structure and Learning Outcomes

4.1 Program Structure and Requirements

The Program structure is depicted in Figure 2 below. Students must complete the following to be eligible to graduate from the program:

- 18.00 credits of Required Core Courses
- 12.00 credits of Elective Courses from two of the four elective options

Students must complete 30 credit hours, with a minimum cumulative grade point average of 4.4 to graduate. Case based learning which emphasizes critical thinking is a core feature of the program. In addition, the program includes two courses (4.5 credit hours in total) specifically dedicated to developing students' skills in case analysis. These courses are progressive in nature and are designed to develop students' analytical and critical skills as well as to help them integrate all of the competency areas in their solution to accounting problems. (Section 5 of this proposal presents the program requirements)

The majority of the courses in the program will be delivered through a mixture of lectures and cases. The Accounting Area at the Schulich School of Business has developed a distinct method for case instruction and analysis that has proven highly successful. The emphasis given to case based instruction in the program's accounting, audit and tax courses as well as an overall commitment to developing students' proficiency in case analysis ensures that students graduate with highly developed critical thinking skills and are well prepared for real world situations characterized by imperfect information, ambiguity and complexity. Student achievement will be assessed by a mixture of examination, group research projects and individual research projects and assignments. Including group work as a component for assessment ensures that students develop a team ethic whilst including a research component in all courses ensures that students develop their skills in conducting accounting and business research.

Figure 2: Program Structure

Diploma in Advanced Accounting		
Master of Accounting		
Term 1	Term 2	Term 3
Courses ACTG 6140 3.00 ACTG 6600 3.00 ACTG 6710 3.00 ACTG 6720 3.00 ACTG 6550 1.50* MACC 6201 1.50	Courses MACC 6301 3.00 <i>Plus</i> <i>Any two sets of</i>	Courses ACTG 6801 3.00* ACTG 6701 3.00* ACTG 6401 3.00* ACTG 6501 3.00*
	Assurance ACTG 6160 3.00 ACTG 6610 3.00	
	Finance ACTG 6310 3.00* ACTG 6320 3.00*	
	Performance Mgmt ACTG 6650 3.00* SGMT 6000 3.00	
	Tax ACTG 6730 3.00* ACTG 6150 3.00	

*New Course

Descriptions of the courses are included in Appendix 1.

4.2 Program Learning Outcomes

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
1. Breadth and Depth of Knowledge																
Have high levels of proficiency in all of the major practice areas of accountancy including: Performance Measurement and Financial Reporting; Audit and Assurance and Taxation	Students are required to take a minimum of 30.0 credit hours of courses that cover these four broad areas of accountancy practice. These courses are advanced in nature and build on prior knowledge in these fields	•	•	•	•	•	•	•	•	•	•		•	•		
Demonstrate a thorough knowledge and understanding of all of the standards that govern the production and audit of financial statements for public and private companies.	The advanced technical knowledge gained in these courses is further enhanced through 10.5 credit hours of case based courses which cover all of this technical material in an integrative way.	•		•			•	•	•					•		
Develop advanced knowledge in two specialist fields	Students take an additional 12 credit hours of electives, from two chosen fields of specialization (6 cr hrs each): Finance, Performance Management, Taxation and Assurance								•	•	•	•	•	•	•	•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
2. Research and Scholarship																
Can demonstrate their ability to conduct situation-based research using available financial and other information about business entities;	All required courses include an applied research component.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Can generate well-structured and formatted reports on the basis of this research;	All courses have at least one group research project, and some assignments require individual student research where originality and creativity are emphasized.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Can apply the results of academic research in accounting case situations;	Some courses, required readings include academic journal articles.	•	•				•	•	•		•			•		
Can demonstrate through relevant applications a general familiarity with the top scholarly outlets in the field.		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG66140	ACTG66550	ACTG66600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG66160	ACTG66610	ACTG66650	SGMT6000	ACTG6730	ACTG66150	ACTG66320	ACTG66310
3. Level of Application and Knowledge																
Make sound decisions in complex situations by applying a mix of evidence, reason, and judgment while considering multiple perspectives	Through 13.5 credit hours of case courses students learn to apply and integrate the knowledge from the various sub-fields of professional accountancy to complex business situations.		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Be able to apply their knowledge to novel applications and contexts including different organizations and industries	Case courses of increasing complexity develop students' proficiency in integrating and applying knowledge of these multiple fields to professional practice contexts.		•	•		•		•	•	•	•	•	•			•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
4. Professional Capacity/ Autonomy																
Show the ability to respond effectively to the ethical dilemmas that accountants face;	In projects and assignments students are exposed to various scenarios in which the accountant is required to make informed decisions in complex decision environments	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Be able to apply ethical frameworks and professional standards to resolve them;	Students take 13.5 credit hours of case courses to develop their critical thinking skills. Ethical decision making is a central theme of all of the program's case based courses.						•	•			•		•			
Demonstrate the ability to act with integrity, transparency and in the public interest.	Ethics and corporate governance themes are covered in all Financial Reporting, Management Accounting, Audit, and Taxation courses. In addition Professional and Ethical Behaviour is a core element of ACTG 6801 Strategic Leadership Planning and Case Analysis	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
5. Level of Communication Skills																
Be able to write concise, well-structured and well researched reports;	The majority of the program's courses require students to write reports and make individual or group presentations of their findings.	•	•	•			•	•	•	•	•	•	•	•	•	•
Demonstrate the ability to present and communicate their ideas clearly and effectively;	Written reports are evaluated on content and clarity of exposition. In the oral presentation of findings communication and presentation skills are honed.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Be able to make effective and professional presentations and produce professionally formatted presentation slides and reports.		•	•	•			•	•	•	•	•	•		•	•	•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
6. Awareness of Limits of Knowledge																
Demonstrate an awareness of the limitations of financial data as a basis for decision making	Case based teaching, will illustrate the limits of accounting as a basis of decision making and will emphasize the need for multiple perspectives in decision making.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
In realistic scenarios, can demonstrate their ability to distinguish between and resolve problems that can be solved using available knowledge despite insoluble issues that need to be managed.	In all courses students are exposed to the multiple theoretical perspectives that underpin debates with accounting audit and related fields	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

5. Admission Requirements

As this is a type 1 diploma, students will be admitted into the Master of Accounting Program. There are no additional admission requirements for the diploma over and above those for the Master of Accounting. The proposed calendar copy for the Diploma in Advanced Accounting is presented below.

Proposed Calendar Copy

The Diploma in Advanced Accounting (DAAC) is a professional diploma program designed to further students' academic and intellectual abilities in all fields of professional accountancy. The program places an emphasis on developing students' critical thinking abilities and their capacity to operate in decision environments characterized by high degrees of ambiguity through applied case analysis. Cases also help to develop students' appreciation of multiple viewpoints and perspectives.

The 8-month, 30 credit program is accredited by CPA Canada. Successful graduates will have completed the CPA Electives and be eligible for entering the CPA Capstone phase of CPA's accreditation program.

Admission Requirements

EITHER

Successful completion of the Diploma in Intermediate Accounting (minimum B GPA)

OR

Applicants must hold a 4-year degree from a recognized university with a minimum B grade point average in the last two full years (or equivalent) of academic work.

Applicants whose degrees are from programs that are not accredited by CPA Canada must first successfully complete the Schulich Diploma in Intermediate Accounting and graduate with a minimum B average.

Applicants with a 4 year business degree from a CPA accredited program must have a minimum B average and must have completed Intermediate Financial Accounting 1, Financial Statement analysis and Law (or their equivalents) in their programs. An acceptable score of either the GMAT or GRE is required (both the general test and writing assessment). Scores older than five years are not accepted.

Applicants will include two letters of reference, one of which must be from their current or former professors.

Work experience is not required; however, strong internships or prior work experience are recommended.

Schulich's standard requirements pertaining to language capability apply.

Waivers and Advanced Standing

For graduates of the Schulich School of Business the following waivers apply:

- GMAT/GRE
- Letters of recommendation

Schulich CPA stream BBA and IBBA graduates and Diploma in Intermediate Accounting graduates will receive advanced standing for Term 1

Graduates from CPA-accredited business schools that have completed Core 1 and Core 2

courses, and Diploma in Intermediate Accounting graduates may receive advanced standing for Term 1. Advanced standing may be granted on a case-by-case basis to graduates of other business programs.

6. Resources

As this is a type 1 diploma, separate resources (either in terms of instructors, administrators, space or library resources) will not be required for its delivery beyond those dedicated to the Master of Accounting program. For completeness, however, the core faculty members participating in the proposed program are summarized below. This list comprises faculty of the Accounting area at the Schulich School of Business with specializations in accounting; auditing and taxation.

Faculty Name & Rank	Home Unit	Primary Graduate Program (yes/no)	Area(s) of Specialization or Field(s)		
			Area/Field 1	Area/Field 2	Area/Field 3
Full Professors					
Linda Thorne	SSB	Yes	Fin. Accounting	Audit	Cor. Governance
Kiridaran (Giri)	SSB	Yes	Man. Accounting	Fin. Accounting	Cor. Governance
Kanagaretnam	SSB	Yes	Fin. Accounting	Audit	
Dean Neu					
Associate Professors					
Umshaker Trevedi	SSB	Yes	Fin. Accounting	Audit	
Janne Chung	SSB	Yes	Audit	Fin. Accounting	
Marcia Annisette	SSB	Yes	Man. Accounting	Fin. Accounting	
Sandy Qu	SSB	Yes	Man. Accounting	Fin. Accounting	
Cameron Graham	SSB	Yes	Fin. Accounting		
Jeff Everett	SSB	Yes	Fin. Accounting		
Amin Mawani	SSB	Yes	Taxation	Fin. Accounting	Law/Health
Sylvia Hsu	SSB	Yes	Man. Accounting	Fin. Accounting	
Hoping Tan	SSB	Yes	Fin Accounting	Finance	
Members Emeriti					
Tom Beechy	SSB	Yes	Fin Accounting	Internat'l. Actg.	
Adjunct Members					
Elizabeth Farrell	SSB	Yes	Fin. Accounting	Audit	
Gail Drory	SSB	Yes	Tax	Fin. Accounting	
Full-Time Contract Faculty					
Domnic Cianflone	SSB	Yes	Man. Accounting	Fin. Accounting	
Douglas Kong	SSB	Yes	Man. Accounting	Fin. Accounting	Audit

7. Support Statements

- Decanal support statement
- Accreditation document from CPA

4.2 Course Descriptions

Term 1

ACTG 6140 3.00 Intermediate Financial Accounting II

This is an Intermediate Accounting course with emphasis on the liability of equity accounts. Major topics include: tax allocation, pensions, leases, capital transactions and financial statement analysis.

ACTG 6600 3.00 Auditing Standards and Applications

This course focuses on the standards and applications underlying the latest functions and responsibilities of external and internal auditors. The theory of audit evidence and certain basic techniques are used to provide an understanding of auditing methodology. The auditor's responsibility beyond the financial audit and current developments in auditing are also examined. Students may be expected to complete a research paper or project.

ACTG 6710 3.00 Introduction to Income Tax

The basic concepts and techniques of income taxation and applications to personal and corporate contexts are examined.

ACTG 6720 3.00 Advanced Income Tax

A continuation of ACTG 6710 3.00, this course concentrates in greater detail on the taxation of business income.

ACTG 6550 1.5 Advanced Management Accounting

This course focuses on managerial planning, performance, and control systems in organizations that direct the behaviour of corporate officers and managers, in order to achieve a specific goal. Different tools and techniques are reviewed including methods of incentivizing employee productivity, compliance, and overall performance assessment. The course emphasizes decision-making through the analysis of case studies and discussions.

MACC 6201 1.50 Multi-competency Case Analysis for Accountants

This course will build on the case analysis fundamentals learned and applied in the previous terms courses. Focusing on financial accounting, the students will work on integrating their analysis with other technical competency areas including taxation, audit and assurance, management accounting, finance and strategy and governance. In addition to the specific technical competency areas, case analysis considers the impact of the development, implementation and use of information systems for the management and processing of data in business settings.

Term 2

MACC 6301 3.00 Integrative Case Analysis for Accountants

This is the second of six case courses for the MAcc Program. This course requires the student to integrate knowledge obtained in the courses taken throughout the program and apply that knowledge to cases that incorporate all of the competency areas including financial reporting, strategy and governance, assurance, finance, management accounting, and taxation.

ACTG 6160 3.00 Advanced Financial Accounting (Assurance Elective)

This course emphasizes accounting for international activities and inter-corporate investments. The application of accounting principles to case situations in specialized industries and non-profit organizations is also considered.

ACTG 6610 3.00 Advanced Auditing (Assurance Elective)

This course extends students' knowledge in the area of auditing by examining the role of the profession in society today, evaluating current issues facing auditors, and building on their understanding of the general audit framework and its fundamental theories. It also examines specific audit topics such as legal liability, comprehensive auditing, fraud, special reports, future-oriented financial information, and environmental auditing.

ACTG 6310 3.00 Advanced Financial Statement Analysis and Valuation (Finance Elective)

This course deals with the many types of methodologies used to determine fair values of businesses, assets and liabilities. This course reviews many of the valuation methods used in practice. Valuations of businesses, tangible assets, intangible assets and liabilities are covered. In particular, valuations of businesses that are being acquired, sold, or liquidated are also addressed.

ACTG 6320 3.00 Advanced Finance Topics (Finance Elective)

Students are exposed to more advanced, complex, and specialized decision making situations in the areas of cash management and portfolio investment, determination of the appropriate capital structure and cost of capital, and methods used to manage financial risk. The course also discusses financial considerations related to business acquisitions and companies in financial distress.

ACTG 6650 3.00 Strategic Performance Evaluation (Performance Management Elective)

Strategic Performance Evaluation places an emphasis on strategic planning, performance assessment, and cost containment systems in organizations. Using an in-depth strategic planning case analysis approach, the course examines cost control methodologies, performance measurement and reward systems, governance and ethics in private and non-profit entities.

SGMT 6000 3.00 Strategic Management (Performance Management Elective)

This course examines business and corporate strategy. The focus is on strategic management, the process of choosing and defining purposes and objectives, formulating and implementing a viable strategy and monitoring strategic performance. It deals with the organization in its totality and demonstrates how and why the various functions of business are interdependent and need to be coordinated if the organization is to perform effectively. The course elaborates on the applicability of the strategic management discipline to a variety of sizes and types of organizations.

ACTG 6730 3.00 Managerial Tax Planning (Tax Elective)

This course builds on ACTG 6710 and ACTG 6720. It explores how individual and corporate taxpayers identify and implement tax planning opportunities in an attempt to maximize after-tax incomes, subject to complying with tax laws, while achieving business or financial strategies.

ACTG 6150 3.00 Complex Financial Reporting Issues (Tax Elective)

This course applies concepts and knowledge learned in intermediate financial accounting courses to specialized industries and business and non-business sectors. The overall objective of the course is to develop an understanding of the stakeholders, and unique accounting and reporting needs of these contexts including banking, investments, real estate, insurance, mining, oil and gas, agriculture, technology, communications, transportation, entertainment, utilities, not for profit and public sector.

Proposal for Graduate Diploma in Professional Accounting

1. Introduction

1.1 *Provide a brief statement of the graduate diploma being proposed, including type, and indicate the parent program and/or unit in which the graduate diploma will be administratively housed.*

The proposed Graduate Diploma in Professional Accounting is a type 3 stand alone diploma to be housed within the School of Administrative Studies in the Faculty of Liberal and Professional Studies.

1.2 *Comment on the appropriateness and consistency of the graduate diploma name with current usage in the discipline or area of study, as appropriate.*

All words in the proposed diploma name are both necessary and desirable:

1. It is a diploma about accounting to be hosted by the Accounting Area of the School of Administrative Studies.
2. It must be a graduate level diploma because the new educational requirements of the Canadian accounting profession insist on these being graduate level courses.
3. Inclusion of "Professional" in the title is consistent with the goal of the diploma, which is to educate students to become professional accountants. It also worth noting that we are a professional school in the Faculty of Liberal Arts and Professional Studies so all programs we offer are "professional"
4. Similar nomenclature is being used in similar diplomas being offered in Ontario under the titles of "Graduate Diploma in Professional Accountancy (McMaster University), "Graduate Diploma in Accounting" (Queen's University, Wilfred Laurier University, and University of Waterloo).

2. General Objectives of the Graduate Diploma

2.1 Provide a brief description of the general objectives of the graduate diploma.

The general objectives of our proposed diploma are two-fold. First, we need to equip students with the necessary knowledge and skills to be successful in becoming a professional accountant, and help them gain advance standing in the process with the professional body. Upon receiving accreditation from Chartered Professional Accountants of Ontario (CPA Ontario), students who successfully complete the program will receive exemptions from 4 of the 6 modules in the Professional Education Program that is offered at CPA Ontario and be able to complete all CPA education requirements in a shorter time. This will also enhance our students' credentials to secure employment after graduation, whether it is in the public accounting industry, private industries, or government units. Second, by introducing a quality diploma program that will help students achieve their goal, we will be able to attract better and brighter students to our undergraduate BAS accounting program.

2.2 *Describe how the general objectives of the graduate diploma align with University and Faculty missions and academic plans.*

The general objectives of the proposed graduate diploma align with University's goal of continuously updating and introducing programs to meet evolving student and societal needs, especially in areas such as business-related and professional programs, especially in accounting, as outlined in the University's White Paper.

The University also wants its programs to be relevant and to have a high reputation for quality. The model of accounting education that has been in place in Ontario since the 1960's is now being replaced. The new model requires a component to be completed at the graduate level. Without this new diploma, SAS can no longer be a major part of accounting education in Ontario. The accounting profession is also planning on accrediting university programs and without the diploma, our accreditation status is in jeopardy.

3. Need and Demand

3.1 *Comment on similar graduate diplomas offered at York and/or by other Ontario universities, with special attention paid to any innovative and distinguishing aspects of the proposed graduate diploma.*

There is no graduate diploma in accounting at York. Schulich offers a Masters of Accounting also oriented towards professional accounting certification, but the scope of that program is different from a diploma.¹

There are approximately 16 university business schools in Ontario and in all of these business schools the accounting major leading to professional accounting certification plays a central role in their program. Similar graduate diplomas are already being offered at McMaster University, Queen's University, University of Waterloo, and Wilfred Laurier University and we expect several of the other business schools to also introduce graduate diplomas. Based on programs that have student intake in 2014, the demand is strong. The diploma is really quite critical to the future of any Ontario business school that wants to be viewed as a leader in accounting education.

Our proposed diploma builds on the technical strength that our students have acquired in their undergraduate studies and at the same time further develops their critical thinking, analytical, and integrative skills. It is carefully designed to meet the exact pedagogical requirements of the new education model. We have had extensive meetings with the accounting profession over the past two years to ensure the diploma is precisely what is wanted and needed.

Different from many other diploma programs, we plan to offer the program two times per year, which allow part time study and aligns with the York student body needs.

3.2 Provide brief description of the need and demand for the proposed graduate diploma, focusing as appropriate on student interest, social need, and potential employment opportunities for graduates, and/or needs expressed by professional associations, government agencies or policy bodies.

There is no issue of forecasting demand for the new diploma. Simply stated, it is a requirement of the new educational model and every accounting student must take this graduate component either at university or directly through the accounting institute. Potential demand constitutes every undergraduate accounting student in the School of Administrative Studies.

This graduate diploma will provide rigorous training to students who would like to pursue the Chartered Professional Accountant designation. The field of professional accounting has undergone significant changes in the past year. The three major professional accounting organizations in Canada (Chartered Accountants, Certified Management Accountants, and Certified General Accountants) have merged to become one unified professional accounting body (Chartered Professional Accountants). As a result, education requirements to obtain the professional designation of CPA are substantially different from its predecessors. One major change is that students who wish to attain some form of advanced standing in the process to become a CPA must obtain part of their accounting education in a graduate level program.

The accounting major has historically comprised half of all majors in business schools and such students prefer a school where they can complete all their educational requirements. It has been a strength of our program for many years that we offer the full slate of courses needed for the professional exams. Without the diploma, we contemplate that demand for our undergraduate degree would fall off markedly and the very viability of the School brought into question. In the past, most of our undergraduate BAS Accounting students aimed to pursue one of the three professional accounting designations. This creates a strong need for a graduate program to help them attain the goal. Moreover, upon completion of the program and having gained advanced standing in the professional education process, our students will be in a better position in the employment market. The diploma therefore is necessary to meet the need and demand for today's students who wish to pursue a professional accounting designation.

In sum, the diploma is critical to the continued success of the School of Administrative Studies.

¹ In the FGS Council Meeting in November 2014, Schulich indicated that they will also be proposing a new diploma that will gear toward Schulich students. The spirit of the diploma is similar to ours: to advance students from undergraduate accounting studies to various stages in the CPA Professional Education Program. In so far as access to the diploma is limited to Schulich BBA students, as we have limited ours to BAS Accounting students, we do not see any duplication in the two diplomas.

Below is BAS Accounting enrolment and BAS Accounting graduates in the last 5 years:

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
BAS Accounting Enrolment	1692	1695	2081	1799	1793
BAS Accounting Graduates	163	150	196	178	193

3.3 Comment on the projected in-take into the graduate diploma, including the anticipated implementation date (i.e. year and term of initial in-take) and steady-state enrolment.

The proposed implementation date is Summer 2016 with an initial intake of 50 students. There will be a second offering in Winter 2017 with 25 students. Two intakes will align with the multiple offerings of the CPA Common Final Exam and ties in with our mandate to provide flexible and accessible programming. In the longer term, based on the number of our past BAS Accounting graduates who eventually pursue one of three professional accounting designations, we expect that there will be substantial demand for our program. As long as they meet the requisite academic standards we expect our BAS graduates (accounting majors) will want to continue on with the diploma. The two programs are clearly articulated and diploma enrolment is clearly influenced by BAS enrolment.

Below is the 5 year projection of enrolment in the proposed diploma, we expect the startup numbers will be the same as those in steady-state:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	Summer/Winter	Summer/Winter	Summer/Winter	Summer/Winter	Summer/Winter
Projected Enrolment	50/25	50/25	50/25	50/25	50/25

4. Curriculum, Structure and Learning Outcomes

4.1 Describe the graduate diploma requirements and associated learning outcomes, including explicit reference to how the diploma curriculum and structure supports achievement of the learning outcomes. For Type 3 graduate diplomas, explain how the curriculum and learning outcomes are consistent with master's degree level expectations.

Graduate diploma requirements:

Students enrolled in the program:

1. Must complete all five required courses with an overall B average ,
2. Cannot have more than 2 courses with C or lower.
3. Must complete all diploma requirements within 1 year.

Learning outcomes

Building on the existing technical knowledge that students have already obtained through their undergraduate education, we expect students to achieve the following three broad sets of learning outcomes upon completion of the program:

Professionalism:

- Understand the responsibility of a professional accountant, the regulatory regime that the profession lies within and act in accordance with professional and ethical conduct to protect public interest.
- Demonstrate the ability to exercise professional judgment, objectivity, and skepticism.

- Be able to communicate effectively both written and oral in a professional manner to meet audience needs.
- Understand the importance of team work and to work effectively in teams.
- Develop self-confidence in performing their work.
- Exhibit strong leadership skills

Technical Knowledge:

- Demonstrate in-depth technical knowledge in the area of assurance, performance management, finance, and taxation that an entry level professional accountant should possess.
- Acquire a comprehensive understanding of techniques required for tackling problems faced by professional accountants.

Problem-Solving and Decision-Making:

- Be able to apply the technical knowledge systematically in solving problems whether the problems are directed or non-directed.
- Be able to evaluate both quantitative and qualitative factors, and questioning the underlying assumptions when solving problems.
- Be able to integrate different areas of studies when solving complex problems.
- Demonstrate the ability to dissect complicated problems, collect and evaluate evidence, provide viable solutions, and draw reasonable conclusions.

The curriculum and its associated outcomes are in line with master's degree level expectations. The rigor in this program requires students to continuously self-assess and implement strategies to improve their study. They are challenged to set higher goals for themselves and develop work plans to achieve those goals. The learning outcomes encompass a broad base of competencies and students are expected to demonstrate these competencies throughout their study in this program. The graduate will be able to critically evaluate and solve problems within the realm of professional accounting, understand the current trend in the profession and be able to communicate in an effective manner to the appropriate audience, which is expected of a master's level graduate in a professional school.

The table below maps the expected learnings outcomes with the specific courses:

Expected Learning Outcomes	Learning Outcomes are achieved by:	PACC 5530	PACC 5550	PACC 5560	PACC 5570	PACC 5590
<p>1. Depth and Breadth of Knowledge</p> <p>The diploma encompasses 4 major areas in professional accounting: Performance Management, Assurance, Taxation, and Finance</p> <p>Upon completion of the diploma students should be able to demonstrate in-depth knowledge of accounting skills that is required of an entry level professional accountant. These include being fluent in accounting and assurance standards, and the application of such in complex scenarios; tax laws in Canada, including tax planning;</p>	<p>Knowledge is built on pre-requisite courses (or their equivalents) acquired in the BAS Accounting degree.</p> <p>In this diploma, students are required to take 15 credits, with 3 credits in each of the specialized area and 3 credits in an integration course that encompasses all the areas.</p>	•	•	•	•	•

<p>management control system and impact on organizations; and the various areas in finance such as financial and treasury management, financial statement analysis and valuation.</p>						
<p>2. Knowledge of Methodologies</p> <p>Demonstrate improvement in their use of software and library resources used by professional accountants.</p> <p>Demonstrate ability to complete independent research and construct coherent reports or case analysis based on research results.</p>	<p>Students will need to make extensive use of library and other academic resources to perform research on accounting and assurance standards, companies' financial statements, and/or tax rules.</p>	•	•	•	•	•
<p>3. Level of Application of Knowledge</p> <p>Be able to apply the technical knowledge systematically in solving problems whether the problems are directed or non-directed.</p> <p>Be able to evaluate both quantitative and qualitative factors, and questioning the underlying assumptions when solving problems.</p> <p>Be able to integrate different areas of studies when solving complex problems.</p> <p>Demonstrate the ability to dissect complicated problems, collect and evaluate evidence, provide viable solutions, and draw reasonable conclusions.</p>	<p>Students will learn advanced topics in the specialized fields and in each course. Field specific knowledge will be integrated in case analysis.</p> <p>In PACC 5530, PACC 5550, PACC 5560, PACC 5570, students will also be asked to solve cases that may cross with one or more specialized fields. In PACC 5590, students will be challenged to solve cases that encompass all fields.</p>	•	•	•	•	•

<p>4. Awareness of Limits of Knowledge</p> <p>Demonstrate awareness of one's limit as an entry level professional accountant. Knowing when and where to seek help if necessary.</p> <p>Aware of the limitation of financial information for decision making purpose.</p> <p>Demonstrate ability to make use of multiple angles and incorporate complete set of facts to fully develop solutions for complex problems.</p>	<p>In case analysis, students will need to identify situations that call for specialists, or require decisions from higher supervision.</p> <p>Moreover, students are encouraged to solve complex problems by integrating skills learnt in various accounting areas in case studies, and realize that multiple tools from different areas are sometimes necessary to solve such complex problems.</p> <p>They will also be challenged to identify situations where uncertainties exist and there may not be enough facts to formulate feasible solutions.</p>	•	•	•	•	•
<p>5. Level of Communication Skills</p> <p>Demonstrate ability to communicate effectively both written and oral in a professional manner to meet audience needs.</p> <p>This includes the ability to present clearly logical arguments, using appropriate professional language, and by means of appropriate presentation tools.</p>	<p>All courses include both oral presentations and extensive report/case writing components.</p> <p>These components account for 50% to 100% of course grades. Students will be evaluated based on content, organization of materials, persuasiveness of the arguments, and the appropriateness of their tone for the intended audience.</p>	•	•	•	•	•
<p>6. Autonomy and Professional Capacity</p> <p>Understand the responsibility of a professional accountant, the regulatory regime that the profession lies within and act in accordance with professional and ethical conduct to protect public interest.</p> <p>Demonstrate the ability to</p>	<p>In PACC 5550, PACC 5560, PACC 5570 and PACC 5590, professional ethics and rules governing professional conducts are examined.</p> <p>All courses have both individual and group assessments. Students will have the opportunity to perform individual case presentations, both oral and written, to demonstrate individual</p>	•	•	•	•	•

<p>exercise professional judgment, objectivity, and skepticism.</p> <p>Understand the importance of team work and to work effectively in teams.</p> <p>Develop self-confidence in performing their work.</p> <p>Exhibit strong leadership skills</p>	<p>ability to complete complex tasks. They will also have opportunities to work in teams to exhibit their ability to work with others and develop leadership skills.</p>					
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4.2 Address how the methods and criteria for assessing student achievement are appropriate and effective relative to the diploma learning outcomes.

Our design of the courses has explicitly linked required learning outcomes to curriculum content and students will be made aware of these linkages.

Student performance assessment will include multiple evaluations methods, such as presentations, professional reports, group work, and written exams. We will evaluate both technical skills and professional skills.

It should be pointed out that diploma graduates will take further qualifying exams with the profession post graduation and it is in our interest to have our program and evaluation methods to be rigorous. It is quite probable that pass rates for different business schools will be used by the profession as a basis for accreditation and accreditation is our goal.

4.3 Provide a list of courses that will be offered in support of the graduate diploma. The list of courses must indicate the unit responsible for offering the course (including cross-lists and integrations, as appropriate), the course number, the credit value, the short course description, and whether or not it is an existing or new course. For existing courses, the frequency of offering should be noted. For new courses, full course proposals are required and should be included in the proposal as an appendix. (The list of courses may be organized to reflect the manner in which the courses count towards the program/field requirements, as appropriate; e.g. required versus optional; required from a list of specified courses; specific to certain concentrations, streams or fields within the program, etc.)

All five required courses for the diploma program are new courses and are open to the graduate diploma students only:

PACC 5530 3.0 Financial Statement Analysis and Valuation

Students learn to analyse corporate financial performance using financial statements and other information from Canadian companies. They learn multiple methods of valuing companies. They write professional analytical and valuation reports and explain complex technical reports in oral presentations.

PACC 5550 3.0 Issues in the Practice of Assurance

The objective of the course is to develop both the technical and practical knowledge necessary to be a competent professional auditor in a variety of engagements. Through writing and presenting professional reports, working in teams, and critiquing current practices, students are guided to provide balanced solutions, which reflect ethical and professional values, to problems that today's professional auditors face.

PACC 5560 3.0 Taxation and Financial Decision Making

Building on undergraduate courses in personal and corporate tax, this course uses the case study method to help students further develop and integrate the key competencies and tax knowledge needed by Canadian accountants in public practice, industry, and government. It looks at the importance of tax in financial decision-making and financial reporting and good internal control and risk management practices.

PACC 5570 3.0 Performance Measurement Systems

This course introduces fundamental theories and concepts behind performance measurements and how these relate to governance, ethics and risk. It makes extensive use of cases to highlight lessons learned and best practices. It aims to develop critical thinking skills via the application of concepts and theories to business cases and improves students' understanding of management behavior related to performance measurements. Course exclusion: GS/FACC 6140

PACC 5590 3.0 Integrative Analysis in Accounting

This case-based course focuses on the development of integrative and analytical skills that professional accountants should possess. Technical areas of study include financial reporting, governance and strategy, management accounting, assurance, finance, and taxation. Through teamwork, report writing, and presentation, students are guided to provide solutions to issues that today's accountants may face, while maintaining ethical behaviour and professionalism.

4.4 Describe the proposed mode(s) of delivery, including how it/they are appropriate to and effective in supporting the diploma learning outcomes.

The accounting profession has made it very clear that the graduate component of the new model is not to deliver technical content but to hone professional judgment skills, communication skills, integrative judgment and critical thinking skills. These are all hallmarks of a seminar approach where two-way dialogue is facilitated and a Socratic approach to learning can be utilized. For that reason we are conducting the courses as limited enrolment seminars with a heavy case orientation.

Students are expected to be actively participating in the seminars to maximize their learning experience. Student led discussions will also be part of the curriculum. Accounting cases require a mastery of technical knowledge in order to discuss higher order issues. It is the primary role of the undergraduate BAS program to provide the technical foundations.

5. Admission Requirements

To be admitted to the program, applicants must have

1. completed the BAS Honors Accounting Degree²
2. obtained an overall GPA of 6.5 or higher in the following courses or their equivalents:

Advanced Financial Accounting: AP/ADMS 4520

² As requested by the FGS APPC, below is a clarification on why this proposed diploma is only available for BAS students:

- Schulich has expressed explicitly that they would support the proposed diploma only if it is offered to BAS students only.
- CPA accreditation is for both the BAS Undergraduate and Graduate Diploma together. If we are to accept non-BAS students, SAS would have to be responsible for providing assessment of the credentials of the outside students to meet CPA standards.
- We want to focus on helping our own students initially, but would like to keep the option open down the road to admit on a case-by-case basis other students who meet the academic requirements.

Advanced Management Accounting: AP/ADMS 4570
 Assurance: AP/ADMS 4551, AP/ADMS 4553
 Tax: AP/ADMS 4561
 Finance: AP/ADMS 4540
 Strategy and Governance: AP/ADMS 4900
 Capstone: AP/ADMS 4590

These academic courses provide students with the breadth and depth of technical knowledge required in the field of professional accounting. They are required by CPA, though not necessarily required by BAS Honors Accounting degree. The grade average is necessary to ensure applicants have the caliber to succeed in the program to become professional accountants and for the program to meet CPA accreditation standards.

6. Resources

6.1 Faculty resources: *Comment on the expertise of the faculty who will actively participate in delivering the graduate diploma, focusing on its current status, as well as any plans in place to provide the resources necessary to implement and/or sustain the graduate diploma. Provide a Table of Faculty, as follows:*

Faculty will be drawn primarily from the Accounting, Audit/MIS/Tax, and Finance areas of the School of Administrative Studies. This currently comprises more than 25 tenured PhD's. We also have a strong team of part time instructors with Master's degrees and/or professional designations who have extensive teaching experience in professional schools. Listed below are the current list of full-time faculty members who have explicitly shown interests in the development and delivery of the courses in this proposed diploma.

Faculty Member & Rank	Home Unit	Primary Graduate Program	Area(s) of Specialization
Brian Gaber, Professor	School of Administrative Studies	Financial Accountability	PhD Wisconsin, USA CPA, CA Financial Accounting
Patrice Gelin, Associate Professor	School of Administrative Studies		PhD HEC Montréal, Canada MBA Université du Québec à Montréal, Canada CFA Financial Accounting
Joanne Jones, Associate Professor	School of Administrative Studies		PhD Schulich School of Business, York University, Canada MBA, Memorial University of Newfoundland, Canada CPA, CA Auditing and Management Information Systems
Sung Kwon, Professor	School of Administrative Studies		PhD Michigan State University, USA MSc University of Wisconsin at Madison, USA Financial Accounting
Liona Lai, Associate Professor	School of Administrative Studies	Financial Accountability	PhD Texas A&M University, USA CPA, CA Financial Accounting
Joanne Magee, Associate	School of Administrative	Public Policy,	LLM York University,

Professor	Studies Public Policy and Administration	Administration, and Law	Canada MBA University of Toronto, Canada FCPA, FCA, CFP Income Tax Law
John Parkinson, Professor	School of Administrative Studies	Financial Accountability	PhD, Bradford, UK MSc, Bradford, UK FCA FCMA JDip MA Management Accounting
Marcela Porporato, Associate Professor	School of Administrative Studies		PhD, IESE Business School, Universidad de Navarra, Spain PhD, UNC, Argentina MSAcc, Suffolk University, USA Management Accounting
Chris Robinson, Associate Professor	School of Administrative Studies	Financial Accountability	PhD, University of Toronto, Canada CPA, CA CFP Finance
Ingrid Spletstoesser, Associate Professor	School of Administrative Studies		PhD, University of Waterloo, Canada MBA, York University, Canada CPA, CA Auditing and Management Information Systems
Gary Spraakman, Professor	School of Administrative Studies	Financial Accountability	PhD, Concordia University, Canada MA, York University, Canada MBA, University of Alberta, Canada CMA Management Accounting
Haiping Wang, Assistant Professor	School of Administrative Studies		PhD, Concordia University, Canada Financial Accounting
Nelson Waweru, Associate Professor	School of Administrative Studies		PhD, University of Cape Town, South Africa MBA, University of Nairobi, Kenya Management Accounting

Note: Up-to-date CVs of faculty who will actively participate in delivering the graduate diploma must be included as an appendix.

6.2 Laboratory facilities:

Lab facilities are not required.

6.3 Space

Sufficient space and classroom facilities are appropriate.

While it is not a requisite for administrating the proposed diploma, we are hoping that the reconfiguration of the Atkinson building when the School of Engineering moves to its own building will prioritize the addition of graduate teaching and study facilities.

7. Support Statements

- from the relevant Dean(s)/Principal, with respect to the adequacy of existing human (administrative and faculty), physical and financial resources necessary to support the graduate diploma, as well as the commitment to any plans for new/additional resources necessary to implement and/or sustain the graduate diploma
- from the Vice-President Academic and Provost, with respect to the adequacy of existing human (administrative and faculty), physical and financial resources necessary to support the graduate diploma, as well as the commitment to any plans for new/additional resources necessary to implement and/or sustain the graduate diploma
- from the relevant Faculties/units/programs confirming consultation on/support for the proposed graduate diploma, as appropriate

York University

Major Modification:

**Addition of a new major and new option
Bilingual BSc in Biology**

Glendon College

Submitted: December 2014

1. Program

Biology

2. Degree Designation

Bachelor of Science (BSc)

3. Type of Modification

The addition of a new option (Bilingual BSc in Biology at Glendon College) to an existing program (BSc in Biology in the Faculty of Science)

4. Effective Date

2015

5. Description of proposed changes, rationale, alignment with academic plans

The Bilingual Bachelor of Science (BSc) in Biology at Glendon College, York University will provide a bilingual science degree option for students interested in a program that integrates a comprehensive examination of the major topics in Biology with an emphasis on a critical empirical approach to the following sub-fields: conservation biology, ecology and animal behaviour. The name of the major and degree designation; BSc in Biology, reflects the most commonly recognized naming convention within the system.

Proposed Changes

While the York University Biology program in the Faculty of Science at the Keele Campus is York's longest-established scientific program and home to internationally-recognized teaching and research faculty offering the following options in Biology, in English: Biology Stream (BSc, iBSc), Biology - Biomedical Science Stream (BSc), Biology - Conservation Ecology Stream (BSc, iBSc) and Biology - Biotechnology Stream (BSc), the addition of the Glendon College Bilingual BSc in Biology option will both complement and differ from the Faculty of Science program. Broadly, the addition of the BSc (and iBSc) at Glendon will offer French-language speakers and learners, as well as bilingual students, a parallel opportunity in terms of degree structure. More specifically, the Bilingual BSc in Biology will expand upon and diversify Glendon's Environmental and Health Studies' (EHS) BA curriculum by providing a science degree option for students interested in the scientific study of the intersections between: environmental studies; and, conservation biology, ecology and animal behaviour in both English and French. Just like the BA in Environmental and Health Studies, the Bilingual BSc in Biology will be housed in the Department of Multidisciplinary Studies at Glendon.

Since the Glendon BSc in Biology will be offered in both languages, Keele and Glendon students alike will have an opportunity to access bilingual science programming. More importantly; however, the provision of a bilingual Biology BSc will address a number of additional needs and demands related to the provision of post-secondary French language programming in Southern Ontario. For example, with rare exception, all Canadian universities offer a BSc in Biology but very few universities offer a BSc in Biology in both English and French. In Ontario, the University of Ottawa and Laurentian University each offer a Biology BSc in both English and French. These institutions serve Eastern and Northern Ontario communities respectively. The Glendon BSc in Biology will be the first and only program offered in both English and French within the post-secondary system in Southern Ontario. Additional differences can be noted between the Glendon BSc in Biology and other existing programs that further distinguish it from the Keele, and other programs, within the system. Students in the Bilingual BSc in Biology will have direct access to the natural Glendon campus setting to conduct field studies and research in both English and French and to apply this learning in their classrooms and laboratory experiences. According to the external reviewers of the BA in Environmental and Health

Studies (EHS) program UPR: “The use of this environment by [faculty] to make students aware of the bio-physical environment and provide an opportunity to sample from or show organisms in a more natural settings is a definite asset. It capitalizes on one of Glendon’s strengths and provides a very different teaching environment.”¹ Students in the Bilingual BSc in Biology will regularly test research, learn theory through practice and help to drive entrepreneurship and innovation within their field – rare opportunities for undergraduates within the current provincial and national post-secondary systems.

Finally, the small-scale campus environment and personalized approach to teaching and learning are a hallmark and distinguishing feature of the Glendon College student experience. “With Glendon’s small classes, averaging 24 students per faculty member, professors have the opportunity to establish direct contact with students, providing them with mentorship an individual attention”² As a result, Glendon programs like the bilingual BSc support York’s ability to strengthen the quality of its undergraduate education through mentoring, in both English and French. Glendon’s leadership in creating bilingual programs with advanced undergraduate research opportunities in ways normally reserved for graduate education is unique in Canada.

Rationale

Student Interest

Growth in student demand for university education and resulting pressures on the Ontario system were shown in a recent study on the demand for baccalaureate education between now and 2025.³ For example, in North America, there are fourteen universities with student populations over 44,000. Canada is home to three of the largest schools, with the largest campus being in Montreal, and the fifth and sixth largest universities in North America located in the GTA: York University with a population of 55,049 and the University of Toronto St. George Campus with a population of 54,701.⁴ Between now and 2025, if students’ geographic preferences do not change, the growth in student demand for baccalaureate education will be 22-37% (30,000-51,000) in the GTA and 8-21% (20,000-53,000) for the rest of Ontario. However, if more GTA students want to attend university in the GTA, the growth in student demand for baccalaureate education will be 37-55% (51,000-74,000) in the GTA and 0-12% (0-30,000) for the rest of Ontario.

Increasing student interest in post-secondary education in Ontario is confirmed by the enrolment growth at York in both undergraduate and graduate programs. Beyond enrolment pressures that represent geographic preferences, student interest in scientific literacy, in computational knowledge and mathematical skill is also on the rise. The Government of Ontario’s *Vision for the post-secondary education sector* (2012) reflects in part, this interest in technology-enabled learning in the sciences and the York BSc now requires “knowledge of and facility with computational methods and tools.”⁵

Given these trends, the Government of Ontario has made a continued commitment to accommodate more new students, to expand educational opportunities for them and to achieve a more highly educated, scientifically-literate workforce and as a result, York set for itself the objective of offering “a much broader range of high quality programs in the basic sciences and other science-related areas.”⁶ Further, Biology is the most sought-after undergraduate degree of the sciences. “In 2012, Biology

¹ Glendon College Environmental and Health Studies Undergraduate Program Review (2010). p. 2.

² Quoted from K. McRoberts on Glendon’s website. Retrieved April 18, 2014 from <http://www.glendon.yorku.ca/english/>

³ Ibid.

⁴ I. Clark and D. Trick (2012). *Establishing New Undergraduate Universities [PowerPoint Slides]*. Retrieved on July 17, 2012 from http://www.oise.utoronto.ca/hec/Ontario_Campus_Symposium/

⁵ York University Senate (2011). *Pan University Bachelor of Science Degree Structure*. Retrieved on December 7, 2013 from <http://www.yorku.ca/univsec/senate/committees/ascp/documents/BScPanUniversityDLE.pdf>

⁶ York University (2010). *White Paper*. Retrieved on June 6, 2012 from <http://vpap.info.yorku.ca/white-paper/>

accounted for roughly 40% of all applications to Science at York and demand far exceeds the available spaces at the University.”⁷

At Glendon, enrolment in Environmental and Health Studies courses and the number of declared EHS majors continues to grow. Major and non-major student interest in English and French language natural science courses at Glendon is well-documented⁸ and the number of EHS majors in the program has more than tripled since the UPR: courses have full or almost full enrolment. Glendon’s Bilingual BSc in Biology will draw upon the success of Glendon’s Environmental and Health Studies Program and will implement some of the key recommendations from the EHS UPR. For example, “broadening the diversity of offerings” was identified as an important way to a) better reflect the breadth of the biological and physical sciences, and b) to broaden some of the French-language offerings⁹.

Further, students surveyed in the EHS UPR “indicated an interest in the option of having the BSc rather than a BA.”¹⁰ Students do so for a variety of reasons. Those intending to go into biotechnology, forensic science, veterinary medicine, medical school, or other science-based graduate work prefer a BSc option because they can complete the required science courses while simultaneously obtaining their Biology degree. With the addition of the Biology BSc, and the strong research backgrounds of the EHS faculty, there is great potential to formalize and expand the involvement of students in undergraduate research projects at the undergraduate level, most importantly, in both English and French. Many students indicated an interest in advanced research-related opportunities through the NATS 4100 *Individualized Studies* course to help them develop the background and expertise that prepares them and makes them competitive for graduate school.¹¹ Creating more research opportunities for senior undergraduate students was key theme in the UPR.¹² Without the BSc option at Glendon, York University is out of step with the rest of the country and some of our bilingual graduates are disadvantaged by its absence.

Biology is the fastest growing of the sciences with increasing global need and demand for scientifically-literate graduates. It is anticipated that the Bilingual BSc in Biology would fuel enrolment growth from qualified applicants in the GTA and beyond, particularly from prospective francophone and francophile students in Southern Ontario for whom the absence of a bilingual BSc in Biology was previously a deterrent to pursuing post-secondary education in the region.

The expected steady-state enrolment for the Bilingual BSc in Biology at Glendon is 88 FTEs (Fiscal Full-Time Equivalent students).

This figure is based on an assumed 1-year retention rate of 75% and a 2-year retention rate of 65%.

We assumed that all students retained after 2 years will graduate from one of the programs (e.g. they may not graduate from the Specialized Honours if their GPA is too low but they would then graduate from the Honours program).

⁷ Glendon College, York University. *Funding to improve access to French-language post-secondary education in Southern Ontario, especially the GTA*. Proposal to the MTCU, January 27, 2014.

⁸ R. Guiasu and J. Martel (2011). *Unit Response to Consultants’ Report: EHS Program*. Glendon College, York University.

⁹ Glendon College Environmental and Health Studies Undergraduate Program Review (2010). Page 2.

¹⁰ *Ibid*, p. 5.

¹¹ *Ibid*, p. 5.

¹² *Ibid*, p. 11.

Year	# 1 st Year Full-Time Students in Glendon's Bilingual BSc in BIOL	Total # Full-Time Students in Glendon's Bilingual BSc in BIOL
2015-16	8	8
2016-17	16	22
2017-18	24	42
2018-19	30	64
2019-20	30	78
2020-21	30	86
2021-22	30	88

Social Need

With the creation of the Glendon's Bilingual BSc in Biology, Southern Ontario's francophone and francophile students will have the same opportunity and access currently available in the rest of the province (through University of Ottawa and Laurentian University). Francophones living in Southern Ontario now represent more than a third of Ontario's francophone population. Moreover, it is the only region where the francophone population continues to grow. By the end of the decade, Southern Ontario will contain half of Ontario's francophone population.¹³ Further, there are 25 francophone high schools in the GTA and Southern Ontario, and Southern Ontario contains the largest concentration of French immersion students in the country. The GTA alone has 40% of Ontario's students.¹⁴

Southern Ontario's francophones place a distinctively high value on university education. In the Central region, the proportion of francophones who have received university education is higher than the overall population (32.2% vs. 28.3%). Nonetheless, Southern Ontario's francophone students pursue university studies primarily in English. A study of young francophones conducted between 1998 and 2006 showed that in Southern Ontario 70% of those who attend university do so at an English-language university.¹⁵ French immersion graduates, also pursue university studies primarily in English.

This situation can be traced primarily to the limited range of French-language programming available.¹⁶ For example, a recent survey conducted by the Office of the French Language Services

¹³ Ministry of Training, Colleges and Universities. *Expanding French Postsecondary Education*. October 24, 2013 (News release).

¹⁴ Statistics Canada, Government of Canada (2012). The evolution of English–French bilingualism in Canada from 1961 to 2011. Retrieved on March 6, 2014 from <http://www.statcan.gc.ca/pub/75-006-x/2013001/article/11795-eng.htm>

¹⁵ Office of the French Language Services Commissioner, Government of Ontario (October 24, 2013). *Action plan for French-language postsecondary education in Central-Southwestern Ontario*. Retrieved February 28, 2014 from www.cfs.gouv.on.ca

¹⁶ This relative lack of programming may also explain the fact that a quarter of students in Southern Ontario's Francophone schools leave the system after grade 8, with most of them going to the English-language system. The same loss does not occur in the other regions.

Commissioner (2013) revealed a poor representation of 0-3% in French programming at colleges and universities in the Central-Southwestern region of Ontario.¹⁷ To cite a 2009 Ministry study:

“The absence of comprehensive programming at the college level and the fact that only a single faculty (attached to York University) offers a limited range of programs—essentially in social sciences and humanities—leads to an exodus of high school graduates to the English-language universities of the region (linguistic transfer) or an exodus from the region (geographical transfer) for those who study in French.”¹⁸

The lack of bilingual program options was highlighted as a major barrier to post-secondary opportunities.

Finally, in addition to the social needs of current and prospective francophone and francophile students living in Southern Ontario, the increasing global emphasis on issues of public health and the environment substantiate the social need for more biology and health science graduates who can work in the science professions and serve both anglophone and francophone populations living in the region.

This is particularly true in Ontario where the latest national statistics on human activity and the environment signal a particular increase in pressures on public health and ecological systems. Global pressures on Canada’s environment such as immigration and population, global warming and climate change, greenhouse gas emissions and industry have also revealed new issues in public health.¹⁹ Ontario is among the top five emitters of greenhouse gas (GHG) in Canada. Greenhouse gases that cause climate change are a threat to the health of Ontarians, the environment and the sustainability of the economy.²⁰ The importance of understanding and communicating the impact of these issues on public health and in providing health related services in English and French will be critical in Southern Ontario where the francophone population continues to grow.

The Government of Ontario’s most recent *Climate Change Progress Report* recognizes this, and reflects and respects the role of conservation biologists and ecologists in achieving “a focus on sustainable cities and a low-carbon approach to meet [the] growing energy requirements. Ontario is taking action. We are moving forward with creating a conservation culture and a sustainable clean low-carbon economy.” Graduates of the Bilingual BSc in Biology at Glendon will be poised to respond and contribute directly to the related social needs of all Ontario populations, but of Franco-Ontarian populations in particular, in both English and French, now and in the future.

Labour Market Demand

Global growth in university participation reflects the global competition for talent and many reports show Canada as having the highest post-secondary attainment rate in the world.²¹ In addition to domestic demand for higher education, several recent studies project very strong increases in international student demand for the employability skills associated with a Canadian post-secondary education over the next decade.²²

¹⁷ Office of the French Language Services Commissioner, Government of Ontario (October 24, 2013). *Action plan for French-language postsecondary education in Central-Southwestern Ontario*. Retrieved February 28, 2014 from www.cfs.gouv.on.ca

¹⁸ Translated from *Éducation en langue française en Ontario: un monde de possibilités*. Documentation de l’éducation en langue française, DDPPELFG, ÉDU-FCU, décembre 2009, 152, emphasis added.

¹⁹ Government of Ontario. *Climate Change Progress Report*. Retrieved from <http://www.ontario.ca/environment-and-energy/report-greenhouse-gas-ghg-emissions>

²⁰ Retrieved on March 22, 2014 from <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE4MzMy&statusId=MTc3MDg5>

²¹ Association of Universities and Colleges of Canada (2011). *Trends in Higher Education Volume I - Enrolment*. Retrieved on December 9, 2013 from <http://www.aucc.ca/wp-content/uploads/2011/05/trends-2011-vol1-enrolment-e.pdf>

²² Ibid.

As a result, Canadian graduates are, and will continue to be, in high-demand locally, nationally and abroad. In recent years, many labourers returned to the post-secondary system to meet the new demands of a health-centric labour market: the biggest increases in part-time undergraduate students were in the social and behavioural sciences and law, followed by business, humanities and the health professions.²³ The most recent Undergraduate Program Review (2010) of Glendon's Environmental and Health Sciences Program showed that it captured the interest of this working and mature student population and expanded its offerings in health-related courses as a direct result.

Not surprisingly, the outlook for employment in science, health and environment-related professions continues to grow in Canada and abroad. This significant rising trend in science-based employment is projected to continue with strong prospects for wages and an emphasis on re-training and lifelong learning.²⁴ More specifically, the Government of Canada projects a significant increase in the need for skilled workers in natural and applied sciences and related occupations over the next number of years.²⁵ The need for science graduates with knowledge of and talent in mathematics and computational methods and tools in particular, as well as scientific research skills (key features of the York BSc degree), will be required for these occupations locally, nationally and abroad. "Instructional research shows that learning activities that integrate theory and practice by providing students with opportunities to apply what they are learning tend to support the development of higher cognitive abilities than do more traditional classroom methods."²⁶ While the discipline of Biology is enormously diverse, conservation biology, ecology and animal behaviour are among the most important features of the environmental and health aspects of our daily activities, students will be at the forefront of science research that both shapes and reflects labour market demand new graduates they prepare to enter the workforce. The latest statistics show that close to 30% of the Canadian population were employed in the biotechnology sector including private and public companies, governments, research institutes, hospitals, universities and technical colleges. The application of technology in industries related to human health, such as; diagnostics and pharmaceuticals, agriculture and food, forestry, environment and energy, and biology and health, is a critical part of the Canadian workforce; therefore, and a critical part of Canada's ability to contribute to the global response to the need for greater therapeutics and diagnostics for human health.²⁷

As a result, Glendon graduates of the Bilingual BSc in Biology will be well-positioned to respond to the labour market demand both at the early and latter stages of their careers. Without Glendon's Bilingual BSc in Biology, York graduates will be clearly disadvantaged in their employability upon graduation.

Professional Associations/Government Agencies

International and interprovincial degree mobility remains an important issue facing new graduates today. Canada, like most industrialized countries, is faced with an advancing technological revolution, global health pressures and an expected shortage of skilled workers in related professions, particularly in fields requiring science and technological skills.²⁸

Glendon College's Bilingual BSc in Biology will provide both the breadth of foundational knowledge

²³ Ibid.

²⁴ Ministry of Training, Colleges and Universities, Government of Ontario (2013). *Labour Market Information*. Retrieved from <http://www.tcu.gov.on.ca/eng/labourmarket/>

²⁵ Office of Francophone Affairs, Government of Canada (2013-14). *Contributing to a stronger francophone community*. Retrieved on February 2, 2014 from <http://www.ofa.gov.on.ca/en/ofa-plans-results1314.html>

²⁶ York University (2010). *White Paper*. Retrieved on June 6, 2012 from <http://vpap.info.yorku.ca/white-paper/>

²⁷ Government of Canada (2013). *Service Canada: Ontario Health Care Labour Market*. Retrieved from <http://www.servicecanada.gc.ca/eng/about/publication/jobseek/lminfo.shtml>

²⁸ Statistics Canada, Government of Canada (2012). *The evolution of English-French bilingualism in Canada from 1961 to 2011*. Retrieved on March 6, 2014 from <http://www.statcan.gc.ca/pub/75-006-x/2013001/article/11795-eng.htm>

and the opportunity for the development and application of research and field skills, in both English and French, better preparing more undergraduate students for direct-entry into more professional science occupations following their undergraduate education.

Statistics Canada reports continuing education as essential for all specialties in the natural and applied science professions with the study of Biology identified as a key asset in the needed credentials.²⁹ With the addition of the Bilingual BSc in Biology, Glendon will respond directly the local, provincial, national and international need for bilingual skilled science workers.

In addition, research funding from the federal and provincial governments has contributed to strong graduate enrolment growth.³⁰ The preparation of undergraduate students for graduate study, particularly in the health professions, further supports the BSc at Glendon. Many medical and doctoral professions require a BSc as opposed to a BA to advance to higher levels of graduate education.

Alignment with Academic Plans

As a Canadian leader in the delivery of bilingual education³¹, Glendon College's vision to become the Southern Ontario Centre of Excellence for Francophone and Bilingual Postsecondary Education is already underway with a new building, new meeting and study space as well as capacity to offer additional programming with important implications for Southern Ontario and York University.

Ontario is home to more than 600,000 francophones – the largest population in Canada outside of Quebec: more than one-third of the province's francophone population lives in Central and Southwestern Ontario. By 2020, more than half of the Ontario francophone population will reside in those regions.³² By establishing a comprehensive French-language undergraduate curriculum that extends its foundation in the liberal arts, social sciences and humanities into the sciences, Glendon College will enhance its leadership in the delivery of bilingual education and respond directly to the diverse needs of the growing francophone population in Southern Ontario.

Further, York University's Strategic Mandate Agreement with the Ministry of Training, Colleges and Universities lists bilingual programs both as an area of current institutional strength and as one of five programs slated for growth.³³

Beyond that, "tremendous enrolment growth at York in both undergraduate and graduate programs" has been a key development at the University in the past decade³⁴ with biology as the most sought-after undergraduate degree of the sciences. Over the next decade, York will continue to expand the scope of its "teaching and research activities in the areas of health and medicine, engineering, applied science, business-related and professional programs."³⁵

With the introduction of the Bilingual BSc in Biology at Glendon, York University will simultaneously ensure access to bilingual post-secondary science programming in all regions of Ontario and affirm Glendon's position as a Canadian leader in the delivery of bilingual education, as well as York's position as a leading Canadian centre of creativity, innovation and knowledge, ultimately furthering the

²⁹ Statistics Canada, Government of Canada (2012). *Employment by industry*. Retrieved on March 18, 2014 from <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/econ40-eng.htm>

³⁰ Association of Universities and Colleges of Canada (2011). *Trends in Higher Education Volume I - Enrolment*. Retrieved on December 9, 2013 from <http://www.aucc.ca/wp-content/uploads/2011/05/trends-2011-vol1-enrolment-e.pdf>

³¹ York University (2010). *White Paper*. Retrieved on June 6, 2012 from <http://vpap.info.yorku.ca/white-paper/>

³² Ministry of Training, Colleges and Universities, Government of Ontario. *Expanding French Postsecondary Education*. October 24, 2013 (News release).

³³ Ontario Ministry of Training, Colleges and Universities and York University' Strategic Mandate Agreement (2014-17), p. 13.

³⁴ York University (2010). *White Paper*. Retrieved on June 6, 2012 from <http://vpap.info.yorku.ca/white-paper/>

³⁵ York University (2010). *White Paper*. Retrieved on June 6, 2012 from <http://vpap.info.yorku.ca/white-paper/>

international respect and reputation of a science degree from York. Recent innovations to the York University BSc degree structure, which underpin Glendon’s Bilingual BSc in Biology, further demonstrate the York (and Glendon) commitment to leveraging and building on the “considerable progress towards [the] long-standing goal of becoming a more comprehensive university.”³⁶

Finally, York University has a developing reputation as a “leader in sustainability” and sustainability research.³⁷ By expanding sustainability research at York into the Southern Ontario Centre of Excellence for Francophone and Bilingual Postsecondary Education at Glendon (with the introduction of the Bilingual BSc in Biology), the College will more explicitly contribute to and benefit from York University’s commitment to research that has impact. The Bilingual BSc in Biology will make the sciences more central to Glendon’s mission to lead in the provision of bilingual post-secondary programming in Southern Ontario and will formally realize the science and sustainability research potential of the Glendon campus setting; a unique natural resource featuring the Glendon woodlots, the Glendon forest and wetland, and sections of the Don River: assets ideal and unmatched in Southern Ontario for the post-secondary study of science and scientific research outside the classroom. The Bilingual BSc in Biology and Glendon campus research site; therefore, will contribute directly to York University’s aspirations in innovation, discovery, research impact and community outreach.

6. Changes to requirements, associated learning outcomes, how the proposed requirements will support the achievement of program learning objectives

Changes to requirements

The number of credits required in the Bilingual B.Sc. in Biology major programs has been adjusted to take into account that Glendon students are subject to the bilingualism requirement. In order to meet this requirement, students must successfully complete six credits in each official language (French and English) at Glendon from the following two categories:

- courses at the second-year level and above in French as a second language and/or in English as a second language;
- courses in any discipline which are designated as satisfying the bilingual requirement.

Here is a comparison between the number of credits in Biology required by both programs:

Glendon - Bilingual Biology	Faculty of Science - Biology
Bachelor Program Major Credits: 39.	Bachelor Program Major Credits: 46.
Specialized Honours BSc Program Major Credits: 60.	Specialized Honours BSc Program Major Credits: 68.
Honours BSc Program Major Credits: 48.	Honours BSc Program Major Credits: 51.
Honours Minor: 30.	Honours Minor: 30.

For more details about the programs and respective requirements, please see the side-by-side comparison of the existing and proposed program in section 11.

³⁶ York University (2010). *White Paper*. Retrieved on June 6, 2012 from <http://vpap.info.yorku.ca/white-paper/>

³⁷ York University (2010). *White Paper*. Retrieved on June 6, 2012 from <http://vpap.info.yorku.ca/white-paper/>

Biology BSc Learning Outcomes

Note that for historical reasons, courses in Environmental and Health Studies, among which biology courses, have been housed under the identifier NATS at Glendon. These courses are henceforth identified as BIOL rather than NATS. The following learning outcomes pertain only to the biology courses that would be part of the Bilingual BSc in Biology program at Glendon.

1. *Depth and Breadth of Knowledge*

1. The ability to show a solid knowledge and understanding of many key terms and concepts in biology and ecology. Such terms and concepts would include, for example: ecosystem, ecological niche, ecological footprint, trophic levels and webs, biodiversity, extinction, keystone species, habitat fragmentation, habitat corridors, natural selection, Darwinian fitness, an evolutionary perspective on various ecological and biological phenomena, the binomial nomenclature system used for naming all biological species, systems of biological classification, phylogenetic trees and methods, genes and DNA, and so on.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 2315 (EN) *Human Physiology in Health and Disease*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human parasitology*;
GL/BIOL 4210 (EN) *Environmental physiology*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

2. The ability to display good knowledge, awareness and understanding of a variety of major issues and case studies in biology. The ability to understand and appreciate that human beings are a part of nature and the complex interactions between people and their environments, both at the present time, as well as throughout the approximately 200 000 year history of our species on Earth.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1800 (EN) *Evolution and Ecology of Humans*;
GL/BIOL 2203 (FR) *Utilisation et conservation des ressources biologiques*;
GL/BIOL 2205 (FR) *Ressources énergétiques et santé des écosystèmes*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 2315 (EN) *Human Physiology in Health and Disease*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human parasitology*;
GL/BIOL 4210 (EN) *Environmental physiology*.

3. The ability to show solid knowledge, awareness, and understanding of many relevant issues related to human life, as well as the complex interactions between various types of environmental degradation and certain aspects of human life. Knowledge of the hereditary and environmental factors influencing certain human diseases, and awareness of the interplay between such hereditary and environmental factors. Understanding the dynamics, causes and consequences of major pandemics and epidemics throughout human history, as well as during modern times.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2315 (EN) *Human Physiology in Health and Disease*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human parasitology*;
GL/BIOL 3230 (FR) *Génétique et santé humaine*;
GL/BIOL 4210 (EN) *Environmental physiology*.

4. The ability to show knowledge of the history of scientific ideas and the development of these ideas, and an understanding of the impact of scientific ideas on human societies.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

5. Acquiring a good, solid level of scientific literacy and understanding of scientific information and methods, as well as the scientific ways of exploring the natural world.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 2315 (EN) *Human Physiology in Health and Disease*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human parasitology*;
GL/BIOL 4210 (EN) *Environmental physiology*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

6. Gaining an appreciation of the extent and importance of the diversity of life on Earth (the existence, for example, of more than 1.8 million species which have been identified and described in the relevant scientific literature; more than 1 million of these species are insects, for example, and more than 97% of all animal species are invertebrates). Developing an awareness of past mass-extinction events, and an understanding of the current impacts our own species has on the biodiversity of our planet, and, therefore, on our own natural support systems.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human Parasitology*;
GL/BIOL 4205 (EN) *Human Insect Interactions*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

2. Knowledge of Methodologies

1. An understanding of the scientific method, and the ways in which the scientific method is applied to various problems in the Life Sciences (Biology, Chemistry, Physics, Anthropology, etc.).

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;

GL/BIOL 1800 (EN) *Evolution and Ecology of Humans*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

2. An ability to evaluate the usefulness and scientific soundness of various approaches to solving various environmental problems.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*.

3. The ability to demonstrate good knowledge of various ways of measuring and estimating biodiversity, including knowledge of relevant indices of biodiversity.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*.

3. Application of Knowledge

1. The ability to apply the scientific method to interpret qualitative and quantitative data and information, and differentiate sound scientific studies and facts from non-scientific methods and claims.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 2315 (EN) *Human Physiology in Health and Disease*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human parasitology*;
GL/BIOL 4210 (EN) *Environmental physiology*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

2. The ability to present, review, interpret, and understand scientific studies and the findings of such studies, and apply this knowledge and understanding to the formulation of environmental and health care policies and the writing of articles about scientific and environmental issues for the general public (science and environmental journalism, for example).

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 1800 (EN) *Evolution and Ecology of Humans*;
GL/BIOL 2203 (FR) *Utilisation et conservation des ressources biologiques*;
GL/BIOL 2205 (FR) *Ressources énergétiques et santé des écosystèmes*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human Parasitology*;
GL/BIOL 4205 (EN) *Human Insect Interactions*;

GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

3. The ability to understand the importance of reviewing, and to actually consult and understand, scholarly scientific reviews and primary scientific articles from reputable scientific journals. The ability to differentiate between primary studies and second hand, indirect information loosely based on such studies.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2203 (FR) *Utilisation et conservation des ressources biologiques*;
GL/BIOL 2205 (FR) *Ressources énergétiques et santé des écosystèmes*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 2315 (EN) *Human Physiology in Health and Disease*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3206 (EN) *Human Parasitology*;
GL/BIOL 4205 (EN) *Human Insect Interactions*;
GL/BIOL 4210 (EN) *Environmental physiology*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

4. The ability to find well-reasoned solutions to environmental problems, based on a scientific analysis of the relevant facts, and by taking into account as many of the relevant environmental factors and societal interests as possible. Making sound, educated judgments on key environmental policy aspects, based on the knowledge acquired during the courses taken in this program.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 3230 (FR) *Génétique et santé humaine*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

4. *Communication Skills*

1. The ability to effectively communicate accurate, comprehensive, and relevant information orally and in writing to various audiences (experts and non-experts alike). Courses required or useful: Most of our courses require the writing of exams and essays, and some of our courses also require our students to give oral presentations.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships* – in this course, for example, students are required to write tests and exams, including answering questions which require longer written answers, as well as write essays and give oral presentations based on the research done for the essays;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

5. Awareness of Limits of Knowledge

1. The ability to understand the limits of their own knowledge, and the importance of each person's own biases, in interpreting certain types of data related to environmental, health, and other scientific issues and fields. An awareness of how such limits and biases can influence our analysis of such issues and the decisions which may arise from these analyses.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*;
GL/BIOL 4215 (EN) *Communication and Sensory Ecology*.

2. The ability to understand the limits of scientific knowledge in certain relevant fields, and the understanding of the basis for certain major scientific controversies, and the limited or insufficient scientific evidence some occasionally fashionable or currently popular claims may be based on.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1800 (EN) *Evolution and Ecology of Humans*;
GL/BIOL 2203 (FR) *Utilisation et conservation des ressources biologiques*;
GL/BIOL 2205 (FR) *Ressources énergétiques et santé des écosystèmes*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*;
GL/BIOL 2310 (EN) *Conservation Biology*;
GL/BIOL 3200 (EN) *Historical Trends in Human-Environmental Interrelationships*.

6. Autonomy and Professional Capacity

1. Developing tangible skills and knowledge directly applicable to relevant careers in biology. Such careers may include: environmental consultant, science or environmental journalism, environmental law, environmental education, as well as preparation for further studies such as graduate work in Environmental Studies or Biology departments, the Faculty of Education, the Faculty of Medicine, etc.

Courses contributing to the achievement of this learning outcome:

All our courses bring a contribution to this overall educational objective.

2. The ability to work well with others. The concept of team work is emphasized in courses requiring group projects and collaborative lab or field work.

Courses contributing to the achievement of this learning outcome:

GL/BIOL 1540 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
GL/BIOL 2300 (EN) *General Ecology* / (FR) *Écologie générale*.

3. The ability to consistently show good evidence of personal integrity, good judgment, and responsible, rational, reasonable, fair-minded and fact-based decision-making.

Courses contributing to the achievement of this learning outcome:

All our courses encourage the development of such qualities.

Achievement of Program Learning Objectives

The Bilingual Bachelor of Science (BSc) in Biology will provide a science degree option for students interested in a program that integrates the examination of the major topics in Biology with an emphasis on a critical approach to the following sub-fields of conservation biology, ecology and animal behaviour within a bilingual context. The provision of mandatory courses in both official languages, ensures that graduates will leave with a unique mix of scientific, analytical, research and communication skills that makes them particularly well equipped to take their place in modern Canadian society.

All students receive a broad introduction to the field of Biology, ranging from evolutionary biology to the history of the life sciences. In addition they will receive a thorough grounding in scientific methodology and laboratory experience to think critically about biological and ecological phenomena in everyday environments. All students are required to take up to six specialized courses on topics of interest to them within the field of Biology to develop intellectual breadth, depth and adaptiveness and establish a firm base for post-graduate study. Students who graduate with an Honours or Specialized Honours degree receive advanced training in research and applied skills. Students are encouraged to apply their acquired intellectual knowledge in research settings by completing research projects in field and laboratory settings.

The program's final year provides opportunities for students to both further develop and to apply their skills in research contexts. All students may wish to take BIOL 4100 *Individualized Studies* to help them develop the background and expertise that prepares them and makes them competitive for graduate school.

7. Overview of consultation undertaken with relevant academic units and impact of the major modifications on other programs (support statements enclosed)

Faculty, staff and students from within Glendon's Environmental and Health Studies Program have been serving as the primary contributors to the development and preparation of the proposal. Consultations with the Office of Principal and the Associate Principal – Academic and Research, as well as the Recruitment and Liaison Office, are ongoing. Consultations with the Faculty of Science and the Department of Biology have taken place and will continue as appropriate. Further, the Environmental and Health Studies Program underwent a formal Undergraduate Program Review (UPR) in 2010 and the reviewers' comments, recommendations and Glendon's responses to the UPR have been important resources for the Brief. Finally, the goals outlined in York University's White Paper: *Building a More Engaged University: Strategic Directions for York University 2010-2020* have served as important points of alignment and reference.

8. Summary of resource implications

Faculty

There are currently two full-time faculty who will actively participate in delivering the proposed major: Professor Jocelyn Martel, who specializes in entomology, ecology, and plant-insect interactions, and Professor Radu Guiasu, who has expertise in areas such as aquatic ecology, animal behaviour, biodiversity, conservation biology, evolutionary biology, systematics and cladistics, ichthyology, and crustacean biology. Contract instructors represent approximately 50% of the teaching faculty in the current program at Glendon. Given the introduction of new courses in English and French, there will be a need to increase the full-time and/or contract teaching complement.

We anticipate the addition of at least two new tenure-stream positions. This should be possible on the basis of start-up funding from the Ontario Ministry of Training, Colleges & Universities, combined with

projected growth in enrolments. The Ministry recently awarded York University \$2.5 Million to support the establishment of new French-language programs at Glendon: a BSc in Biology is among them. Ministry financial support is anticipated for at least the next two years. Under our current plan, some of these funds would be carried forward to subsequent two years. By 2018, given the projected enrolment growth, the program, should achieve a steady state.

Laboratory facilities

In 2012, Glendon College completed a major expansion of its facilities and equipment with the opening of a new building: the Centre of Excellence for French-language and Bilingual Postsecondary Education in Southern Ontario. The major features of this new facility include: a 250-seat auditorium to increase space in popular courses; an interpretation booth and projection equipment which will function as a training facility; 5 new lecture halls of varying sizes, entirely equipped with the latest classroom technologies, with tiered seating to maximize professor-student visibility; new seminar rooms which include screens and LCD projectors, as well as comfortable seating to allow close interaction between students and professors.

As part of the introduction of the Biology BSc, plans are underway to improve facilities for research and teaching with a number of options under consideration. The Biology (teaching) laboratory (YH 343) and the adjacent rooms will require some improvements and additional facilities are currently being identified for laboratory, classroom and office space for use by undergraduate students and faculty. A field station situated on the Glendon campus's natural setting for ecological is also being explored. Many available resources were recently acquired for the EHS program including: new microscopes, prepared slides, display specimens and preserved specimens as well as Biology charts for teaching purposes. As enrolment in the EHS program has continued to grow, so too has the investment in lab supplies and materials.

Office, laboratory and general research space

Since the proposed major draws primarily from the existing faculty complement, office, laboratory and general research space exist and are already available for faculty, undergraduate and/or graduate students with plans to identify at least one additional teaching/research lab. The new Centre of Excellence building concentrates bilingual interdisciplinary and disciplinary research and graduate studies at Glendon College in one space. Further, York University is home to more than 26 research centres, institutes and state-of-the-art facilities that provide students and professors with outstanding interdisciplinary and collaborative research tools. In addition, faculty and students have access to York's five libraries: Glendon's Frost Library houses 300,000 books, print periodicals, theses, archival materials, microforms, and films; and across campus, to more than 2.6 million printed volumes, 266,000 e-books and more than 40,000 full text e-journals. Bilingual research resources for Glendon's Environmental and Health Studies program are currently available at the Frost Library (Glendon Campus). In order to support research in French for the proposed subfields (conservation biology, ecology and animal behaviour) additional investment would be needed. The proposed major would also be supplemented by the extensive English collection at the Steacie Science Library (Keele Campus). Faculty and students also have access to more than 50 professional librarians, and to ongoing library workshops and research seminars for students. There is access to 500 computer workstations and 2,900 study seats throughout the libraries.

Academic supports, services and information technology

Academic Services at Glendon College offers services to students on academic matters and provides information on University and College rules and regulations in both French and English. Several other units on campus support students in both official languages through a range of curricular and co-curricular services including: Glendon Counselling & Disability Services, the Peer Mentorship Program, the Alumni Mentorship Program, Academic Accommodation for Students with Disabilities, the University Learning Skills Program, and the Glendon Writing Centre. These services combined

with access to state-of-the-art facilities, such as classrooms that are equipped with multimedia technologies, enhance learning and student experience. Further, the Glendon/York vision for technology directly contributes to both the theoretical and practical aspects of the program's curriculum by continuing to integrate the strengths of information technology to enhance the way students learn; enhance the way faculty teach, advise, and conduct research; enhance the way administrators and staff provide services; and enhance the way the University itself is managed. This environment will enable the program to attract the best possible students, faculty, staff and external support by demonstrating the institution's willingness to explore and exploit the possibilities that technology creates for advancing our educational and research missions in both languages.

9. Other relevant criteria outlined in YUQAP Section 3.3 (Evaluation Criteria: Objectives, Admission requirements, Structure, Program content, Mode of delivery, Assessment of teaching and learning, quality indicators) to the proposed changes

Objectives

The Bilingual Bachelor of Science (BSc) in Biology will provide a bilingual science degree option for York University students at Glendon College, York's bilingual campus. Glendon's Bilingual BSc in Biology will be the first and only Biology BSc offered in English and French within the post-secondary system in Southern Ontario and will; therefore, achieve several University and Faculty goals and respond directly to student interests, social need, labour market demands, and the education and training requirements of related professional associations and government agencies.

Further, Glendon's Bilingual BSc in Biology will provide students with direct access to Glendon's beautiful natural setting, a bio-physical environment ideal for the teaching and learning of science, for scientific research and for field work in both English and French. Students may access and use this resource to sample from, to show and study organisms in their natural setting, and to conduct experiments. These research-related opportunities offered by the physical setting of the Glendon College campus will provide rare undergraduate experiences for studying science outside the classroom. Students will be well-prepared to conduct more advanced research, to engage in more rigorous field work and to pursue more advanced studies in both languages immediately upon graduation.

Admission requirements

The minimum requirements for admission to the Bilingual BSc in Biology at Glendon are as follows:

Ontario high-school students are required to have:

- Ontario Secondary School Diploma (OSSD), with the minimum overall grade average set by Glendon;
- a minimum of six 4U or 4M courses, including 4U English ENG4U (Francophone applicants can present 4U French courses FRA4U, FIF4U, or FEF4U instead of 4U English). A combination of 4U and 4M courses is accepted;
- SBI4U, SCH4U and MHF4U (this is the same admission requirement as for the BSc in Biology in the Faculty of Science).

Moreover,

- 4 U French is recommended;

- SPH4U is recommended; (this is the same recommendation as for the BSc in Biology in the Faculty of Science).
- As Glendon offers programs in English and in French, you can demonstrate proficiency in either language during the admission process – you are not required to show proficiency in both languages.

To be considered for admission as a mature applicant, a prospective student must:

- be at least 21 as of the first day of classes;
- have been out of full-time high school studies for at least two years or have returned to upgrade after a two year absence;
- have attempted less than one full year of studies at an accredited college or university;
- not have an unfavourable academic record;
- have demonstrated potential for success through academic, professional or volunteer activities, and other accomplishments;
- SBI4U, SCH4U and MHF4U, or equivalent. (Furthermore, SPH4U or its equivalent is recommended).

To be admitted as a university transfer student, an applicant will be required to:

- have completed at least four full-year courses or one year of full-time studies at an accredited university;
- have obtained a minimum overall average of 2.0 on a 4-point scale (C/60% or equivalent);
- have earned a minimum overall average of 2.3 on a 4-point scale (C+/65% or equivalent) if applying to one of the Honours-level programs;
- SBI4U, SCH4U and MHF4U, or equivalent. (Furthermore, SPH4U or its equivalent is recommended).

To be admitted as a college transfer student, an applicant will be required to:

- have completed a diploma program or at least two full semesters or one year of full-time studies at an accredited college;
- have maintained a minimum overall average of 3.0 on a 4-point scale (B/70% or equivalent) including all attempted courses;
- SBI4U, SCH4U and MHF4U, or equivalent. (Furthermore, SPH4U or its equivalent is recommended).

Note: These are minimum requirements only. Admission is not guaranteed and all requirements are subject to change.

Applicants who do not fall into one of the above categories should visit www.glendon.yorku.ca/admissions

Structure

A student graduating from York University with an Honours Bachelor of Science Degree “will possess greater depth in the major discipline, and a more concrete awareness of the strengths and limitations of scientific enquiry and of their own knowledge. Students will also have the opportunity to complete courses necessary to prepare for graduate study, including experience in research and/or autonomous scholarship”.³⁸

The following requirements fully respect the B.Sc. Matrix.

Recall that, for historical reasons, courses in Environment and Health Studies, among which biology courses, have been housed under the identifier NATS at Glendon. These biology courses will now bear the BIOL identifier.

The core courses for the program will consist of a total of 24 credits:

- GL/BIOL 1540 6.00 (EN) *Introductory Biology* / (FR) *Principes de biologie*;
- GL/BIOL 2300 3.00 (EN) *General Ecology* / (FR) *Écologie générale*;
- GL/BIOL 2310 3.00 (EN) *Conservation Biology*;
- Either GL/BIOL 2203 6.00 (FR) *Utilisation et conservation des ressources biologiques* or GL/BIOL 2205 6.00 (FR) *Ressources énergétiques et santé des écosystèmes*;
- Either GL/BIOL 3200 6.00 (EN) *Historical Trends in Human-Environmental Interrelationships* or GL/BIOL 3230 6.00 (FR) *Génétique et santé humaine*.

For the bilingual BSc major in Biology, students must complete at least 39 credits in Biology, including:

- The 24 credits of core courses
- 12 credits at the 3000 or 4000 level.

For the bilingual Honours BSc in Biology, students must complete at least 48 credits in Biology, including:

- The 24 credits of core courses;
- 18 credits at the 3000 or 4000 level, with at least 12 credits at the 4000 level;
- GL/BIOL 3XXX 3.00 Field Course (to be created).

For the bilingual Specialized Honours BSc in Biology, students must complete at least 60 credits in Biology, including:

- The 24 credits of core courses;
- 18 credits at the 3000 or 4000 level, with at least 12 credits at the 4000 level;
- GL/BIOL 3XXX 3.00 Field Course (to be created);
- GL/BIOL 4XXX 3.00/6.00 Honours Thesis (to be created).

³⁸ York University. (2011) Senate. *Pan University Bachelor of Science Degree Structure*. Retrieved on December 7, 2013 from <http://www.yorku.ca/univsec/senate/committees/ascp/documents/BScPanUniversityDLE.pdf>

Program content

All 24 credits of core courses already exist in the EHS BA and are offered each year. They will now be BIOL courses.

GL/BIOL 1540 6.00 (EN) *Introductory Biology* / (FR) *Principes de biologie*

This course is specifically designed for both non-science majors and those interested in pursuing a degree in any biologically related field. It provides an introduction to the diversity of life, how and why it arose, and the interactions of organisms with each other and their environment.

GL/BIOL 1800 3.00 (EN) *Evolution and Ecology of Humans*

This course contrasts the ecological conditions attendant upon early human evolution with the complex environmental situations now faced by modern technological societies. Essential themes are Darwinism, the effect of earlier cultures upon the environment and selected modern examples in human ecology.

GL/BIOL 2203 6.00 (FR) *Utilisation et conservation des ressources biologiques*

Ce cours analyse les effets de l'activité humaine sur les ressources renouvelables biologiques : biodiversité, agriculture, forêts, pêcheries, etc. Le cours traite de sujets d'actualité tels que les invasions biologiques, la désertification, les perturbateurs endocriniens et les organismes transgéniques. Appréciation de l'impact de l'activité humaine sur les ressources biologiques par une analyse critique des éléments suivants: croissance de la population humaine, biodiversité, invasions biologiques, approvisionnement en eau potable, agriculture, foresterie et sylviculture, déboisement et désertification, pêcheries et aquaculture, milieux humides, eutrophisation, pesticides, perturbateurs endocriniens, organismes transgéniques et clonage.

En plus des présentations faites par le professeur, ce cours comprend des discussions basées sur la lecture d'articles récents ou sur la présentation de films documentaires pertinents. Les étudiants devront compléter un projet de recherche étayé comprenant un bibliographie annotée, une présentation orale et un essai. L'échelle d'évaluation comprend le projet de recherche de même que des examens écrits (questions à développement) portant sur les sujets discutés en classe.

GL/BIOL 2205 6.00 (FR) *Ressources énergétiques et santé des écosystèmes*

Ce cours analyse l'impact de l'utilisation des ressources énergétiques (combustibles fossiles, hydroélectricité, énergie nucléaire, etc.) sur le fonctionnement et l'intégrité des écosystèmes. Le cours traite autant de l'impact local (ex : smog) que de l'impact global (ex : réchauffement climatique).

GL/BIOL 2300 3.00 (EN) *General Ecology* / (FR) *Écologie générale*

This course is an introduction for non-science majors to the scientific study of relationships between organisms and their physical and biological environments. General principles will be used to interpret patterns in the distribution, abundance, and characteristics of organisms in space and time.

GL/BIOL 2310 3.00 (EN) *Conservation Biology*

Conservation biology has emerged as a major new subject area addressing the alarming loss of biological diversity throughout the world. The number of species that are becoming endangered or vulnerable is unprecedented and continues to accelerate. This course explores means of prevention of loss, the causes of species declines, and the effect of human intervention. The goals of this course are to understand concepts and theories underlying conservation biology, to develop critical thinking in matters related to biodiversity (both scientifically and politically), and to learn tools used by conservation biologists to protect diversity.

GL/BIOL 2315 6.00 (EN) *Human Physiology in Health and Disease*

This course examines the basic structure and function of the human body and the underlying mechanisms of selected diseases. The course provides a broad overview of human physiology with a focus on current issues in human health. Human physiology is the major scientific discipline that forms the foundation of medicine and other health studies-related disciplines. The objective of this course is to provide students with a basic understanding of the structures and functions of the human body, introducing some fundamental concepts in physiology (the function of living systems). This course emphasizes the central concept of homeostasis- how human cells, tissues, organs and systems function to maintain a stable internal environment, and what occurs in many human diseases when normal structure and function break down. An appreciation of how the human body normally functions in healthy individuals is essential for understanding how alterations in homeostasis can lead to disease states. This course promotes the understanding of the basic principles of human physiology as it relates to disease by using a mechanism-based approach to teaching human disorders. It relies on the comprehension and application of concepts (not simply memorization), which allows for the development of critical thinking skills.

GL/BIOL 3200 6.00 (EN) *Historical Trends in Human-Environmental Interrelationships*

This course examines the profound impact of ancient environments upon living organisms, with reference to specific biological problems such as extinction. Early palaeolithic humans interacted with various natural ecosystems, which became modified as a result. The subsequent historical impact of human activities on the environment resulted in a trend of increasing pressures upon animal populations, world vegetation and soils. Current urban-rural land use conflicts and conservation problems exemplify the modern impact.

GL/BIOL 3206 3.00 (EN) *Human parasitology*

This course examines the basic principles of parasitology, parasite life cycles, host-parasite interactions, parasite control measures, and epidemiology of important human parasites. In addition, the ecological, medical and socio-economic impact of parasites on global health is examined.

GL/BIOL 3230 6.00 (FR) *Génétique et santé humaine*

Le cours présente les bases cellulaires et moléculaires de la génétique. Il adopte une approche historique de la génétique moderne mendélienne et classique et vise à initier les étudiants à l'analyse génétique moderne du génotype et du phénotype des maladies humaines. Du diagnostic génétique à la thérapie génique, il aborde les problèmes actuels de la bioéthique, où l'être humain passe de l'objet à soigner à l'objet à améliorer et à transformer.

GL/BIOL 4100 3.00 or 6.00 (EN) *Individualized Studies* / (FR) *Travail individuel*

Students do independent reading and/or research under the guidance of one or several members of the faculty. Permission of the Chair of the department is required.

GL/BIOL 4205 3.00 (EN) *Human-Insect Interactions*

This course offers an overview of the multifaceted relationships between the human species and insects. It will include an introduction to entomology. The following aspects will be discussed: economic, health, and environmental impact of insects, insects in arts, culture, mythology, phobia, etc.

GL/BIOL 4210 3.00 (EN) *Environmental physiology*

This course examines important concepts and principles of environmental physiology, a branch of biology that focuses on how physiological systems in animals, including humans, integrate with one another in response to a change in environment.

GL/BIOL 4215 3.00 (EN) *Communication and Sensory Ecology*

This course explores the various categories of signals used by animals in a variety of contexts, and the sensory channels which allow these signals to be sent and received. Other topics include: honest

and deceitful communication, Game Theory and Information Theory applications, bird song, echolocation, bioluminescence, and the evolution of communication.

The following existing cross-listed courses will be offered in support of the Biology BSc program by the Psychology Department at Glendon College:

GL/PSYC/NATS 3670 3.00 (EN) *Psychobiology* / (FR) *Psychobiologie*

This course reviews the physiological basis of behaviour including elements of neuroanatomy, psycho-physiology, neuropsychology and psycho-pharmacology.

GL/PSYC/NATS 3675 3.00 (EN) *Humans as Primates: Comparative Evolution* / (FR) *L'humain comme espèce primate*

This course discusses non-human primate research from comparative, developmental and evolutionary perspectives, focusing on its implications for human psychology. Topics may include primate evolution (brain/behaviour) and ecology, parenting, mating, social dominance/affiliation, language, deception, self-awareness, cognition and imitation.

GL/PSYC/NATS 3680 3.00 (EN) *Evolution of Behavior in Animals*

Research and theory with animals are considered. Perspectives in evolution, ethology, sociobiology and psychology are dealt with. Topics covered include facial, vocal and spatial communications; perception, learning and reproduction.

All 24 credits of core courses will be offered every year. Glendon and Keele Biology students will have the opportunity to pursue courses on both campuses. New courses will be created that will reflect the expertise of the current and new faculty members associated with the program. Whenever possible, the courses created will differ significantly from those already offered in the biology program at Keele. Upper-level courses will be strategically and collaboratively chosen so that students from both campuses have a diversified choice of courses to select from. The following 3rd- and 4th-year courses offered at Glendon will be available for Keele Biology students: BIOL 3206, BIOL 4205, BIOL 4210 and BIOL 4215.

The following laboratory science course will also support the BSc in biology:

GL/NATS 1000 6.00 (EN) *Energy, Physical Sciences and the Environment*

This course examines the basic principles of Physics in order to study Energy, Earth and Environmental Sciences. This fundamental knowledge allows scrutiny of problems of sustainability. Energy, forms, and systems will central themes through the course.

With the collaboration of the Faculty of Science, students will have the possibility of completing their 6-credit 1000-level laboratory requirement at the Keele campus in chemistry or physics.

The following mathematics courses will support the fulfillment of the science requirement outside the major as well as the general education requirement of 6 credits in math at the 1000 level. These courses are offered annually by the Department of Mathematics at Glendon College:

GL/MATH 1610 3.00 (EN) *Introduction to Statistical Methods I*

This course covers the elements of probability theory and standard probability distributions, the measures and techniques used in descriptive statistics, principles of sampling and tests of significance.

GL/MATH 1620 3.00 (EN) *Introduction to Statistical Methods II*

This course covers the correlations and regression analysis, analysis of variance and parametric tests, and problem work emphasizing applications of statistics in the social sciences.

GL/MATH 1650 3.00 (EN) *Modes of Mathematical Reasoning*

This course develops basic mathematical literacy in logic (true/false statements; correct/incorrect conclusions: quantifiers), in the language of sets (finite/infinite sets; set operations; Cartesian products), on functions (composition; invertibility; direct/inverse images), on mathematical induction and combinatorics.

GL/MATH 1930 3.00 (EN) *Calculus I* / (FR) *Calcul différentiel et intégral I*

This is a basic course in university calculus. Topics covered are functions, limits, continuity, differentiation, curve sketching, maximization and minimization problems for functions of one variable, the Riemann integral and antiderivatives.

GL/MATH 1940 3.00 (EN) *Calculus II* / (FR) *Calcul différentiel et intégral II*

A continuation of Calculus I. Topics covered are logarithms and exponentials, trigonometry including inverse trigonometric functions, hyperbolic trigonometry, the techniques of integration, indeterminate forms and L'Hospital's Rule, an introduction to sequences and series. Applications of the integral to the calculation of areas, volumes, work.

GL/MATH 1660 3.00 (EN) *Linear Algebra I*

This is a basic mathematics course as well as a very useful course for someone who wishes to do applied research in the social sciences. Among the topics considered are vectors, bases, matrices, systems of linear equations, rank and determinants. Some applications of linear algebra to various other disciplines, such as economics, are also included.

GL/MATH 2660 3.00 (EN) *Linear Algebra II*

This is a continuation of Linear Algebra I. More about vectors spaces, subspaces, linear transformations. Eigenvalues, eigenvectors, similarity, diagonalization. Positive definite quadratic forms. Inner product spaces and Gram-Schmidt orthogonalization.

GL/MATH 2670 6.00 (EN) *Second-Year Calculus I* / (FR) *Calcul des fonctions de plusieurs variables*

Numerical series and power series, vector algebra and calculus with applications to curves, and motions along curves in two and three dimensions. Functions of several variables, including partial differentiation, properties of surfaces, tangent lines and planes, and the problem of finding maximum and minimum values for such functions (with or without constraining side conditions). The rest of the course is devoted to double and triple integrals, line integrals and surface integrals, and some elementary differential equations.

At Glendon, in the absence of a Computer Science Department, computer science courses are taught by computer scientists but are housed under the ITEC rubric of the Department of Multidisciplinary Studies. The following courses are offered every year:

GL/ITEC 2635 3.00 (EN) *Creation and Management of a site on the WWW* / (FR) *La création et la gestion d'un site sur le WWW*

This course presents the client server model of the Web with different methods to secure a Web site. The students will learn how to build and manage a Web site using DHTML, Java Script, and animation and sound manipulation software.

GL/ITEC 2915 3.00 (EN) *Computer Usage and Software Applications I* / (FR) *L'utilisation de l'ordinateur et des logiciels d'application I*

The course will present: the main computer components (hardware and software), advanced topics for the use, edition and layout of documents alone or as part of a team, the creation and use of dynamic Web pages, advanced INTERNET information search techniques, and the design and implementation of a relational database using a database management system (DBMS) with applications to specific environments.

GL/ITEC 2925 3.00 (EN) *Computer Usage and Software Applications II* / (FR) *L'utilisation de l'ordinateur et des logiciels d'application II*

This course presents advanced options in Microsoft Word and excel used to format: correct a document automatically; create and manipulate a collaborative document; create, use, and store macros in a document; secure a document. The students will learn how to enhance a Web site using image animation and sound.

Mode of delivery

The proposed major will feature lecture, seminar-style and laboratory courses that emphasize the combination of learning theory and conducting laboratory and field experiments, as well as participating in, research projects that allow students to apply and gauge the depth, breadth and limits of their knowledge of human inquiry and empirical skill within autonomous and professional capacities. These modes of delivery directly support the learning outcomes.

Assessment of teaching and learning and Quality indicators

Students graduating with a Glendon Bilingual Biology Bachelor of Science degree will possess depth in Biology, and a concrete awareness of the strengths and limitations of scientific enquiry and of their own knowledge. The methods for assessing student achievement directly reflect the York University BSc structure and specify the specific criteria relative to program learning outcomes and Degree Level Expectations as follows:

1. an understanding of and experience with the scientific method, the methodology and/or laboratory practices appropriate to Biology and the theoretical frameworks of Biology;

2. knowledge of and facility with mathematics, the language of science;

Rationale The use of mathematics is a necessary and integral feature of science. Whether calculus, linear algebra, statistics, discrete math, or another field, mathematics is ubiquitous throughout science, as a descriptive and analytical tool, for modeling and simulation, and in Biology for preparation and analysis of statistical data.

3. knowledge of and facility with computational methods and tools;

Rationale: Modern science increasingly relies on computation as an enabling tool, whether for data collection and analysis (including extremely large data sets), visualization of systems, or investigation of theoretical predictions through modeling and simulation.

4. breadth and depth in science:

a. a degree of breadth across the foundational science disciplines of Biology, Chemistry and Physics;

Rationale: Biology, Chemistry and Physics form the foundation of the science in so far as it seeks to describe and understand the natural world. This foundation exposes students to the broad ranges of scale and of levels of complexity, organization and abstraction spanned by science.

b. a degree of depth and expertise in one or more disciplines within the Physical and Life Sciences, Computer Science and Mathematics.

c. a degree of breadth in practical/laboratory experiences;

d. a degree of depth (beyond the first-year courses) in a scientific discipline (which includes all current BSc major subject areas) outside Biology in order to foster the interdisciplinarity that is increasingly a hallmark of modern science.

Rationale: Many, if not most, new scientific fields are inherently inter- or multi-disciplinary. Given this fact it is in our students' best interests to have significant exposure to more than one discipline. Providing our students with this additional depth will help prepare them to respond to an evolving knowledge base and participate in emerging fields.

5. breadth in areas of human inquiry beyond Biology, including exposure to issues, methodologies and thought processes of the liberal arts; *Rationale: University is more than just a training ground for a particular discipline. Graduates should be educated to appreciate and value as many facets of human knowledge and scholarship as possible, to more completely prepare them to contribute thoughtfully, knowledgeably and compassionately to society.*

6. demonstrated critical thinking and analytical skills inside and outside Biology; *Rationale: A primary role of the University is to foster critical thinking and analytical skills in its students. Developing these skills in more than one area of study will promote adaptability and portability of skills, and enable students to approach problems with fresh perspectives and in new ways.*

7. an ability to communicate orally and in writing to a variety of audiences in English and French. *Rationale: This ability is critical to success in any career. In the case of science, creating and disseminating new knowledge and using it to better human societies and life on earth more generally will ultimately depend on communication among scientists, policy makers, industry and broader society.*

10. A summary of how students currently enrolled in the program will be accommodated

Students currently pursuing the BA in Environmental and Health Studies at Glendon will be offered the possibility of joining the B.Sc. in Biology program at Glendon. BIOL courses listed in the previous section would be recognized in the B.Sc. program.

11. A side-by-side comparison of the existing and proposed program requirements as they will appear in the Undergraduate or Graduate Calendar

Glendon - Bilingual Biology	Faculty of Science - Biology
<p>The program core (24 credits) is defined as:</p> <ul style="list-style-type: none"> • GL/BIOL 1540 6.00 (EN) <i>Introductory Biology</i> / (FR) <i>Principes de biologie</i>; or <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>); • GL/BIOL 2300 3.00 (EN) <i>General Ecology</i> / (FR) <i>Écologie générale</i>; • GL/BIOL 2310 3.00 (EN) <i>Conservation Biology</i>; • GL/BIOL 2203 6.00 (FR) <i>Utilisation et conservation des ressources biologiques</i> or GL/BIOL 2205 6.00 (FR) 	<p>The program core (24 credits) is defined as:</p> <ul style="list-style-type: none"> • <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>); • <u>SC/BIOL 2070 3.00</u> or any three of <u>SC/BIOL 2010 4.00</u>, <u>SC/BIOL 2030 4.00</u>, <u>SC/BIOL 2050 4.00</u>. Both <u>SC/CHEM 2020 3.00</u> and <u>SC/CHEM 2021 3.00</u> may replace one of these three biology courses; • additional courses from the following for a total of at least 18 2000-level credits: <u>SC/BIOL 2010 4.00</u>, <u>SC/BIOL 2020 3.00</u>, <u>SC/BIOL 2021</u>

<p><i>Ressources énergétiques et santé des écosystèmes;</i></p> <ul style="list-style-type: none"> GL/BIOL 3200 6.00 (EN) <i>Historical Trends in Human-Environmental Interrelationships</i> or GL/BIOL 3230 6.00 (FR) <i>Génétique et santé humaine.</i> <p><u>Bachelor Program: 90 Credits</u></p> <p>Major credits: students must complete at least 39 credits in biology, including:</p> <ul style="list-style-type: none"> the 24 credits of core courses; 12 credits at the 3000 level or above. <p>General education requirements: every student shall complete 27 credits in total as follows:</p> <ul style="list-style-type: none"> 12 credits among the general education categories: humanities (HUMA), modes of reasoning (MODR), natural science (NATS), and social science (SOSC), with at least 6 from HUMA and/or SOSC; 6 credits in mathematics at the 1000 level, excluding remedial courses; 3 credits in computer science at the 1000 level; 6 credits from courses with laboratories at the 1000-level in chemistry or physics. <p>Science requirement outside of the major: every student shall complete 24 credits in science disciplines outside the major, of which 3 credits must be at the 2000 level or above. 15 of these 24 credits are satisfied through the <i>general education requirements</i> listed before.</p> <p>Bilingual requirement: all students admitted to Glendon must satisfy the bilingual</p>	<p><u>3.00, SC/BIOL 2030 4.00, SC/BIOL 2040 3.00, SC/BIOL 2050 4.00, SC/BIOL 2060 3.00, SC/BIOL 2070 3.00, both SC/CHEM 2020 3.00 and SC/CHEM 2021 3.00.</u></p> <p>Bachelor Program</p> <p>A. General education:</p> <ul style="list-style-type: none"> non-science requirement: 12 credits; mathematics: <u>SC/MATH 1505 6.00</u>, or six credits from <u>SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1025 3.00</u>; computer science: <u>LE/EECS 1520 3.00</u> or <u>LE/EECS 1530 3.00</u> or <u>LE/EECS 1540 3.00</u>; foundational science: six credits from <u>SC/CHEM 1000 3.00</u> and <u>SC/CHEM 1001 3.00</u> (prerequisites for <u>SC/BIOL 2020 3.00</u> and <u>SC/CHEM 2020 3.00</u>) or <u>SC/PHYS 1410 6.00, SC/PHYS 1420 6.00</u> or <u>SC/PHYS 1010 6.00</u>. <p>B. Major requirements:</p> <ul style="list-style-type: none"> the program core specified above (24 credits); additional credits from biology courses, as required for an overall total of at least 46 credits from biology courses, including at least 12 credits at the 3000 level or above. <p>C. Science breadth: 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. 15 of these 24 credits are satisfied by the General Education requirement.</p>
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<p>requirement. In order to do so, students must successfully complete six credits in each official language (French and English) at Glendon from the following two categories:</p> <ul style="list-style-type: none"> • courses at the second-year level and above in French as a second language and/or in English as a second language; • courses in any discipline which are designated as satisfying the bilingual requirement. <p>Upper-level credits: at least 18 credits at the 3000 level or above. This includes the 3000 and 4000 level credits listed above.</p> <p>Residency requirement: a minimum of 30 credits at York and at least half (50 per cent) of the course credits required in each undergraduate degree program major/minor must be taken at Glendon.</p> <p>Graduation requirement: students must successfully complete (pass) at least 90 credits which meet the Faculty's degree and program requirements with a cumulative grade point average of at least 4.00 (C).</p> <p>Note: please refer to the Rules and Regulations section of the Undergraduate Calendar for detailed requirement information.</p> <p>Honours Programs: 120 credits</p> <p><u>Specialized Honours BSc Program: 120 Credits</u></p> <p>Major credits: students must complete at least 60 credits in biology, including:</p> <ul style="list-style-type: none"> • the 24 credits of core courses; 	<p>D. Upper level: a minimum of 18 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required, for an overall total of 90 credits.</p> <p>F. Standing requirements: a minimum overall grade point average of 4.00 (C) is required in order to be eligible to graduate with a BSc degree (bachelor program).</p> <p>Honours Programs</p> <p>Specialized Honours Program</p> <p>Students may follow a stream in biology, biomedical science or biotechnology.</p> <p>A. General education:</p> <ul style="list-style-type: none"> • non-science requirement: 12 credits; • mathematics: SC/MATH 1505 6.00, or six credits from SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH
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<ul style="list-style-type: none"> • GL/BIOL 3XXX 3.00 Field Course (to be created); • GL/BIOL 4XXX 3.00/6.00 Honours Thesis (to be created); • 18 credits at the 3000 level or above, of which at least 12 credits at the 4000 level. <p>General education requirements: every student shall complete 27 credits in total as follows:</p> <ul style="list-style-type: none"> • 12 credits among the general education categories: humanities (HUMA), modes of reasoning (MODR), natural science (NATS), and social science (SOSC), with at least 6 from HUMA and/or SOSC; • 6 credits in mathematics at the 1000 level, excluding remedial courses; • 3 credits in computer science at the 1000 level; • 6 credits from courses with laboratories at the 1000-level in chemistry or physics. 	<ul style="list-style-type: none"> • <u>1025 3.00</u>; • computer science: <u>LE/EECS 1520 3.00</u> or <u>LE/EECS 1530 3.00</u> or <u>LE/EECS 1540 3.00</u>; • foundational science: six credits from <u>SC/CHEM 1000 3.00</u> <u>SC/CHEM 1000 3.00</u> and <u>SC/CHEM 1001 3.00</u> <u>SC/CHEM 1001 3.00</u> (prerequisites for <u>SC/BIOL 2020 3.00</u>, <u>SC/BIOL 2020 3.00</u> and <u>SC/CHEM 2020 3.00</u>, <u>SC/CHEM 2020 3.00</u>) or <u>SC/PHYS 1410 6.00</u>, <u>SC/PHYS 1410 6.00</u> or <u>SC/PHYS 1420 6.00</u>, <u>SC/PHYS 1420 6.00</u> or <u>SC/PHYS 1010 6.00</u>, <u>SC/PHYS 1010 6.00</u>. Note that the biomedical science and biotechnology streams require specific courses (see below). <p>B. Major requirements:</p> <p>Biology Stream</p> <ul style="list-style-type: none"> • The program core, as specified above (24 credits); • <u>SC/BIOL 3100 2.00</u>, <u>SC/BIOL 4000 8.00</u> or <u>SC/BIOL 4000 3.00</u>; • additional credits from biology courses, as required for an overall total of at least 68 credits from biology courses, including at least 18 credits at the 3000 or higher level, of which at least 12 credits are at the 4000 level. <p>Biomedical Science Stream</p> <ul style="list-style-type: none"> • <u>SC/CHEM 1000 3.00</u> and <u>SC/CHEM 1001 3.00</u>; • one of <u>SC/PHYS 1410 6.00</u> or <u>SC/PHYS 1420 6.00</u> or <u>HH/PSYC 1010 6.00</u>; • the program core, as specified above (24 credits), including <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>); <u>SC/BIOL 2020 3.00</u>; <u>SC/BIOL 2021 3.00</u>; <u>SC/BIOL 2040 3.00</u>; <u>SC/BIOL 2070 3.00</u>; <u>SC/CHEM 2020 3.00</u> and <u>SC/CHEM 2021 3.00</u>; a minimum of one of <u>SC/BIOL 2030 4.00</u>
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	<p>or <u>SC/BIOL 2060 3.00</u>; <u>SC/BIOL 3100 2.00</u>; <u>SC/BIOL 4000 8.00</u> or <u>SC/BIOL 4000 3.00</u>;</p> <ul style="list-style-type: none"> • a minimum of nine credits chosen from the following courses: <u>SC/BIOL 3060 4.00</u>; <u>SC/BIOL 3070 4.00</u>; <u>SC/BIOL 3110 3.00</u>; <u>SC/BIOL 3130 3.00</u>; <u>SC/BIOL 3150 3.00</u>; <u>SC/BIOL 3150 4.00</u>; <u>SC/BIOL 3155 3.00</u>; <u>SC/BIOL 4010 3.00</u>; • additional biology credits from the following courses, as required, for an overall total of 68 biology credits: <u>SC/BIOL 2010 4.00</u>, <u>SC/BIOL 2030 4.00</u>, <u>SC/BIOL 2060 3.00</u>, <u>SC/BIOL 3010 3.00</u>, <u>SC/BIOL 3060 4.00</u>, <u>SC/BIOL 3070 4.00</u>, <u>SC/BIOL 3071 3.00</u>, <u>SC/BIOL 3110 3.00</u>, <u>SC/BIOL 3120 3.00</u>, <u>SC/BIOL 3130 3.00</u>, <u>SC/BIOL 3140 4.00</u>, <u>SC/BIOL 3150 3.00</u>, <u>SC/BIOL 3150 4.00</u>, <u>SC/BIOL 3155 3.00</u>, <u>SC/BIOL 4010 3.00</u>, <u>SC/BIOL 4020 3.00</u>, <u>SC/BIOL 4030 3.00</u>, <u>SC/BIOL 4061 3.00</u>, <u>SC/BIOL 4110 4.00</u>, <u>SC/BIOL 4141 3.00</u>, <u>SC/BIOL 4150 3.00</u>, <u>SC/BIOL 4151 3.00</u>, <u>SC/BIOL 4155 3.00</u>, <u>SC/BIOL 4200 3.00</u>, <u>SC/BIOL 4220 4.00</u>, <u>SC/BIOL 4270 3.00</u>, <u>SC/BIOL 4285 3.00</u>, <u>SC/BIOL 4290 4.00</u>, <u>SC/BIOL 4310 3.00</u>, <u>SC/BIOL 4320 3.00</u>, <u>SC/BIOL 4350 4.00</u>, <u>SC/BIOL 4360 4.00</u>, <u>SC/BIOL 4370 3.00</u>, <u>SC/BIOL 4380 3.00</u>, <u>SC/BIOL 4450 4.00</u>, <u>SC/BIOL 4510 3.00</u>; • within the 68 biology credits, at least 18 credits must be at the 3000 level or higher, of which at least 12 credits must be at the 4000 level. This must also include a minimum of seven credits from 3000 level or higher biology courses with an associated laboratory component. <p>Biotechnology Stream</p> <ul style="list-style-type: none"> • <u>SC/CHEM 1000 3.00</u> and <u>SC/CHEM 1001 3.00</u>; <u>SC/PHYS 1410 6.00</u>;
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<p>Science requirement outside the major: every student shall complete 24 credits in science disciplines outside the major, of which 3 credits must be at the 2000 level or above. 15 of these 24 credits are satisfied through the <i>general education requirements</i> listed before.</p>	<ul style="list-style-type: none"> • <u>AP/ECON 1000 3.00</u>, <u>AP/ECON 1010 3.00</u>, <u>AP/ECON 1010 3.00</u> and one of the following: <u>AP/PHIL 2070 3.00</u>, <u>AP/PHIL 2070 3.00</u> or <u>AP/PHIL 2075 3.00</u>, <u>AP/PHIL 2075 3.00</u> (will count towards the non-science requirement in the General Education component); • the program core, as specified above (24 credits), including <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>), <u>SC/BIOL 2020 3.00</u>, <u>SC/BIOL 2021 3.00</u>, <u>SC/BIOL 2040 3.00</u>, <u>SC/BIOL 2060 3.00</u>, <u>SC/BIOL 2070 3.00</u> and both <u>SC/CHEM 2020 3.00</u> and <u>SC/CHEM 2021 3.00</u>; • <u>SC/CHEM 2080 4.00</u>; <u>SC/CHEM 3070 3.00</u> or <u>SC/CHEM 3071 3.00</u> or <u>SC/CHEM 4050 3.00</u>; <u>SC/CHEM 3080 4.00</u>; • <u>SC/BIOL 3100 2.00</u>; <u>SC/BIOL 3110 3.00</u>; <u>SC/BIOL 3130 3.00</u>; <u>SC/BIOL 3140 4.00</u>; <u>SC/BIOL 3150 3.00</u>; • <u>SC/BIOL 4000 8.00</u> or <u>SC/BIOL 4000 3.00</u>; <u>SC/BIOL 4290 4.00</u>; • a minimum of 9 credits chosen from the following courses in lists A and B, with a minimum of six credits chosen from list A. • List A: <u>SC/BIOL 3010 3.00</u>, <u>SC/BIOL 3120 3.00</u>, <u>SC/BIOL 3155 3.00</u>, <u>SC/BIOL 4020 3.00</u>, <u>SC/BIOL 4030 3.00</u>, <u>SC/BIOL 4061 3.00</u>, <u>SC/BIOL 4285 3.00</u>; • List B: <u>SC/BIOL 3160 4.00</u> (<u>SC/BIOL 2010 4.00</u> is a prerequisite), <u>SC/BIOL 4010 3.00</u>, <u>SC/BIOL 4040 3.00</u>, <u>SC/BIOL 4150 3.00</u>, <u>SC/BIOL 4151 3.00</u>, <u>SC/BIOL 4160 3.00</u>, <u>SC/BIOL 4270 3.00</u>, <u>SC/BIOL 4370 3.00</u>, <u>SC/BIOL 4510 3.00</u>; • additional biology credits as required for an overall total of at least 54 biology credits, including at least 12 credits at the 4000 level. <p>C. Science breadth: a total of 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. 15 of these 24 credits are satisfied by</p>
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<p>Bilingual requirement: all students admitted to Glendon must satisfy the bilingual requirement. In order to do so, students must successfully complete six credits in each official language (French and English) at Glendon from the following two categories:</p> <ul style="list-style-type: none"> • courses at the second-year level and above in French as a second language and/or in English as a second language; • courses in any discipline which are designated as satisfying the bilingual requirement. <p>Upper-level credits: at least 42 credits at the 3000 level or above. This includes the 18 credits at the 3000 and 4000 levels in the major listed above under <i>major credits</i>.</p> <p>Residency requirement: a minimum of 30 credits at York University and at least half (50 per cent) of the course credits required in each undergraduate degree program major/minor must be taken at Glendon.</p> <p>Graduation requirement: students must successfully complete (pass) at least 120 credits which meet the Faculty's degree and program requirements with a cumulative grade point average of at least 5.00 (C+).</p> <p>Standing requirements: to declare Specialized Honours requires successful completion of at least 24 credits, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To proceed in each year of a Specialized Honours program requires a minimum cumulative credit-weighted grade point</p>	<p>the General Education requirement. In the biomedical science and biotechnology streams, this requirement is fully satisfied by the above requirements.</p> <p>D. Upper level: a minimum of 42 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required, for an overall total of 120 credits.</p> <p>F. Standing requirements: to declare Specialized Honours requires successful completion of at least 24 credits, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To proceed in each year of a Specialized Honours program requires a minimum cumulative credit-weighted grade point</p>
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<p>average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To graduate in a Specialized Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p> <p>Note: please refer to the Rules and Regulations section of the Undergraduate Calendar for detailed requirement information.</p> <p><u>Specialized Honours iBSc Program: 120 Credits</u></p> <p>Major credits: students must complete at least 60 credits in biology, including:</p> <ul style="list-style-type: none"> • the 24 credits of core courses; • GL/BIOL 3XXX 3.00 Field Course (to be created); • GL/BIOL 4XXX 3.00/6.00 Honours Thesis (to be created); • 18 credits at the 3000 level or above, of which 12 credits at the 4000 level. <p>General education requirements: every student shall complete 27 credits in total as follows:</p> <ul style="list-style-type: none"> • 12 credits among the general education categories: humanities (HUMA), modes of reasoning (MODR), natural science (NATS), and social science (SOSC), with at least 6 from HUMA and/or SOSC; • 6 credits in mathematics at the 1000 level, excluding remedial courses; • 3 credits in computer science at the 1000 level; 	<p>average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To graduate in a Specialized Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p>
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- 6 credits from courses with laboratories at the 1000-level in chemistry or physics.

Science requirement outside the major:

every student shall complete 24 credits in science disciplines outside the major, of which 3 credits must be at the 2000 level or above. 15 of these 24 credits are satisfied through the *general education requirements* listed before.

Bilingual/trilingual requirement: for the iBSc bilingual, students must complete at least 18 credits in each official language (French and English) at Glendon from the following two categories:

- courses at the second-year level and above in French as a second language and/or in English as a second language;
- courses in any discipline which are designated as satisfying the bilingual requirement.

For the iBSc trilingual, in addition to the above 18 credits in each official language (English and French), students must complete 18 credits in Hispanic studies (including: [GL/SP 3000 6.00](#)) or six credits of an advanced-level course in Hispanic studies) or 18 credits in a modern language (including an advanced-level course) at York University.

Courses taken to fulfill the major requirements may also be used to fulfill the iBSc requirements.

Internationally-oriented course

requirement: at least 12 credits of internationally-oriented courses.

Exchange requirement: at least one full term abroad as a full-time student at an institution with which Glendon and/or York has a formal

<p>exchange agreement.</p> <p>Upper-level credits: at least 42 credits at the 3000 level or above. This includes the 18 credits at the 3000 and 4000 levels in the major listed above under <i>major credits</i>.</p> <p>Residency requirement: a minimum of 30 credits at York and at least half (50 per cent) of the course credits required in each undergraduate degree program major/minor must be taken at Glendon.</p> <p>Graduation requirement: students must successfully complete (pass) at least 120 credits which meet the Faculty's degree and program requirements with a cumulative grade point average of at least 5.00 (C+).</p> <p>Standing requirements: to declare Specialized Honours requires successful completion of at least 24 credits, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To proceed in each year of a Specialized Honours program requires a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To graduate in a Specialized Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p> <p>Note: please refer to the Rules and Regulations section of the Undergraduate</p>	
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<p>Calendar for detailed requirement information.</p> <p><u>Honours BSc Program: 120 Credits</u></p> <p>Major credits: students must complete at least 48 credits in biology, including:</p> <ul style="list-style-type: none"> • The 24 credits of core courses; • GL/BIOL 3XXX 3.00 Field Course (to be created); • 18 credits at the 3000 level or above, of which at least 12 credits at the 4000 level. <p>General education requirements: every student shall complete 27 credits in total as follows:</p> <ul style="list-style-type: none"> • 12 credits among the general education categories: humanities (HUMA), modes of reasoning (MODR), natural science (NATS), and social science (SOSC), with at least 6 from HUMA and/or SOSC; • 6 credits in mathematics at the 1000 level, excluding remedial courses; • 3 credits in computer science at the 1000 level; • 6 credits from courses with laboratories at the 1000-level in chemistry or physics. 	<p><i>Honours Major Program (BSc)</i></p> <p>In addition to the Biology Honours Major, students may follow a stream in biomedical science.</p> <p>Biology Honours Major</p> <p>A. General education:</p> <ul style="list-style-type: none"> • non-science requirement: 12 credits; • mathematics: SC/MATH 1505 6.00, or six credits from SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1025 3.00; • computer science: LE/EECS 1520 3.00 or LE/EECS 1530 3.00 or LE/EECS 1540 3.00; • foundational science: six credits from SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00 (prerequisites for SC/BIOL 2020 3.00 and SC/CHEM 2020 3.00) or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or SC/PHYS 1010 6.00. Note that the biomedical science stream requires specific courses (see below). <p>B. Major requirements:</p> <p>Biology stream</p> <ul style="list-style-type: none"> • The program core, as specified above (24 credits); • additional credits from biology courses, as required, for an overall total of at least 51 credits from biology courses, including at least 18 credits at the 3000 or higher level, of which at least 12 credits are at the 4000 level. <p>Biomedical Science Stream</p> <ul style="list-style-type: none"> • SC/CHEM 1000 3.00 and SC/CHEM
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	<p><u>1001 3.00</u>;</p> <ul style="list-style-type: none"> • one of <u>SC/PHYS 1410 6.00</u> or <u>SC/PHYS 1420 6.00</u> or <u>HH/PSYC 1010 6.00</u>; • the program core, as specified above (24 credits), including <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>), <u>SC/BIOL 2020 3.00</u>, <u>SC/BIOL 2021 3.00</u>, <u>SC/BIOL 2040 3.00</u>, <u>SC/BIOL 2070 3.00</u>, <u>SC/CHEM 2020 3.00</u> and <u>SC/CHEM 2021 3.00</u>; a minimum of one of <u>SC/BIOL 2030 4.00</u> or <u>SC/BIOL 2060 3.00</u>; • a minimum of nine credits chosen from the following courses: <u>SC/BIOL 3060 4.00</u>; <u>SC/BIOL 3070 4.00</u>; <u>SC/BIOL 3100 2.00</u>; <u>SC/BIOL 3110 3.00</u>; <u>SC/BIOL 3130 3.00</u>; <u>SC/BIOL 3150 3.00</u>; <u>SC/BIOL 3150 4.00</u>; <u>SC/BIOL 3155 3.00</u>; <u>SC/BIOL 4010 3.00</u>; • additional biology credits from the following courses, as required, for an overall total of 51 biology credits: <u>SC/BIOL 2010 4.00</u>, <u>SC/BIOL 2030 4.00</u>, <u>SC/BIOL 2060 3.00</u>, <u>SC/BIOL 3010 3.00</u>, <u>SC/BIOL 3060 4.00</u>, <u>SC/BIOL 3070 4.00</u>, <u>SC/BIOL 3071 3.00</u>, <u>SC/BIOL 3100 2.00</u>, <u>SC/BIOL 3110 3.00</u>, <u>SC/BIOL 3120 3.00</u>, <u>SC/BIOL 3130 3.00</u>, <u>SC/BIOL 3140 4.00</u>, <u>SC/BIOL 3150 3.00</u>, <u>SC/BIOL 3150 4.00</u>, <u>SC/BIOL 3155 3.00</u>, <u>SC/BIOL 4010 3.00</u>, <u>SC/BIOL 4020 3.00</u>, <u>SC/BIOL 4030 3.00</u>, <u>SC/BIOL 4061 3.00</u>, <u>SC/BIOL 4110 4.00</u>, <u>SC/BIOL 4141 3.00</u>, <u>SC/BIOL 4150 3.00</u>, <u>SC/BIOL 4151 3.00</u>, <u>SC/BIOL 4155 3.00</u>, <u>SC/BIOL 4200 3.00</u>, <u>SC/BIOL 4220 4.00</u>, <u>SC/BIOL 4270 3.00</u>, <u>SC/BIOL 4285 3.00</u>, <u>SC/BIOL 4290 4.00</u>, <u>SC/BIOL 4310 3.00</u>, <u>SC/BIOL 4320 3.00</u>, <u>SC/BIOL 4350 4.00</u>, <u>SC/BIOL 4360 4.00</u>, <u>SC/BIOL 4370 3.00</u>, <u>SC/BIOL 4380 3.00</u>, <u>SC/BIOL 4450 4.00</u>, <u>SC/BIOL 4510 3.00</u>; • within the 51 biology credits at least 18
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<p>Science requirement outside the major: every student shall complete 24 credits in science disciplines outside the major, of which 3 credits must be at the 2000 level or above. 15 of these 24 credits are satisfied through the <i>general education requirements</i> listed before.</p> <p>Bilingual requirement: all students admitted to Glendon must satisfy the bilingual requirement. In order to do so, students must successfully complete six credits in each official language (French and English) at Glendon from the following two categories:</p> <ul style="list-style-type: none"> • courses at the second-year level and above in French as a second language and/or in English as a second language; • courses in any discipline which are designated as satisfying the bilingual requirement. <p>Upper-level credits: at least 42 credits at the 3000 level or above. This includes the 18 credits at the 3000 and 4000 levels in the major listed above under <i>major credits</i>.</p> <p>Residency requirement: a minimum of 30 credits at York and at least half (50 per cent) of the course credits required in each undergraduate degree program major/minor must be taken at Glendon.</p> <p>Graduation requirement: students must successfully complete (pass) at least 120 credits which meet the Faculty's degree and program requirements with a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+)</p>	<p>credits must be at the 3000 level or higher, of which at least 12 credits must be at the 4000 level. This must also include a minimum of seven credits from 3000 level or higher biology courses with an associated laboratory component.</p> <p>C. Science breadth: a total of 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. 15 of these 24 credits are satisfied by the General Education requirement. In the biomedical science stream this requirement is fully satisfied by the above requirements.</p> <p>D. Upper level: 42 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required, for an overall minimum total of 85 credits from science disciplines (including the major) and an overall total of 120 credits.</p> <p>F. Standing requirements: to graduate in an Honours program requires successful completion of all Faculty requirements and</p>
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<p>over all courses completed.</p> <p>Note: please refer to the Rules and Regulations section of the Undergraduate Calendar for detailed requirement information.</p> <p><u>Honours iBSc Program: 120 Credits</u></p> <p>Major credits: students must complete at least 48 credits in biology, including:</p> <ul style="list-style-type: none">• The 24 credits of core courses;• GL/BIOL 3XXX 3.00 Field Course (to be created);• 18 credits at the 3000 level or above, of which at least 12 credits at the 4000 level. <p>General education requirements: every student shall complete 27 credits in total as follows:</p> <ul style="list-style-type: none">• 12 credits among the general education categories: humanities (HUMA), modes of reasoning (MODR), natural science (NATS), and social science (SOSC), with at least 6 from HUMA and/or SOSC;• 6 credits in mathematics at the 1000 level, excluding remedial courses;• 3 credits in computer science at the 1000 level;• 6 credits from courses with laboratories at the 1000-level in chemistry or physics. <p>Science requirement outside the major: every student shall complete 24 credits in science disciplines outside the major, of which 3 credits must be at the 2000 level or above. 15 of these 24 credits are satisfied through the <i>general education requirements</i> listed before.</p> <p>Bilingual/trilingual requirement: for the iBSc bilingual, students must complete at least 18 credits in each official language (French and</p>	<p>departmental required courses, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p>
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<p>English) at Glendon from the following two categories:</p> <ul style="list-style-type: none">○ courses at the second-year level and above in French as a second language and/or in English as a second language;○ courses in any discipline which are designated as satisfying the bilingual requirement. <p>For the iBSc trilingual, in addition to the above 18 credits in each official language (English and French), students must complete 18 credits in Hispanic studies (including: GL/SP 3000 6.00) or six credits of an advanced-level course in Hispanic studies) or 18 credits in a modern language (including an advanced-level course) at York University.</p> <p>Courses taken to fulfill the major requirements may also be used to fulfill the iBSc requirements.</p> <p>Internationally-oriented course requirement: at least 12 credits of internationally-oriented courses.</p> <p>Exchange requirement: at least one full term abroad as a full-time student at an institution with which Glendon and/or York has a formal exchange agreement.</p> <p>Upper-level credits: at least 42 credits at the 3000 level or above. This includes the 18 credits at the 3000 and 4000 levels in the major listed above under <i>major credits</i>.</p> <p>Residency requirement: a minimum of 30 credits at York and at least half (50 per cent) of the course credits required in each undergraduate degree program major/minor must be taken at Glendon.</p> <p>Graduation requirement: students must</p>	
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successfully complete (pass) at least 120 credits which meet the Faculty's degree and program requirements with a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.

Note: please refer to the [Rules and Regulations section](#) of the Undergraduate Calendar for detailed requirement information.

Honours Double Major BSc Program

The Honours BSc program described above may be pursued jointly with any other Honours degree program offered at Glendon. For further details on requirements, see the listings for specific Honours programs. *(Note: The science requirement outside the major is not applicable to double major and major/minor programs where the second major or minor is a science discipline.)*

Honours Double Major Program

All Honours BSc degree candidates should consult departmental advisers as early as possible concerning course requirements for particular Honours Double Major programs. Possible subject combinations for Honours Double Major BSc degree programs are listed under Undergraduate Degree Programs in the Faculty of Science Undergraduate Degree and Certificate Programs section. Students should consult with a departmental advisor to plan their studies in order to meet the requirements for both majors and their prerequisites.

A. General education:

- non-science requirement: 12 credits;
- mathematics: [SC/MATH 1505 6.00](#), or six credits from [SC/MATH 1013 3.00](#), [SC/MATH 1014 3.00](#), [SC/MATH 1025 3.00](#);
- computer science: [LE/EECS 1520 3.00](#) or [LE/EECS 1530 3.00](#) or [LE/EECS 1540 3.00](#);
- foundational science: six credits from [SC/CHEM 1000 3.00](#) and [SC/CHEM 1001 3.00](#) (prerequisites for [SC/BIOL 2020 3.00](#))

<p><u>Honours Double Major iBSc Program</u></p> <p>The Honours iBSc program described above may be pursued jointly with any other Honours degree program offered at Glendon. For further details on requirements, see the listings for specific Honours programs. <i>(Note: The science requirement outside the major is not applicable to double major and major/minor programs where the second major or minor is a science discipline.)</i></p>	<p>and <u>SC/CHEM 2020 3.00</u>) or <u>SC/PHYS 1410 6.00</u> or <u>SC/PHYS 1420 6.00</u> or <u>SC/PHYS 1010 6.00</u>.</p> <p>B. Major requirements:</p> <ul style="list-style-type: none">• <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>);• at least 12 credits from 2000-level biology courses in the program core;• additional credits from biology courses, as required for an overall total of at least 42 credits from biology courses, including at least 18 credits at the 3000 level or above, of which at least 12 credits are at the 4000 level;• the course requirements for the second major . <p>C. Science breadth: a total of 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. 15 of these 24 credits are satisfied by the General Education requirement. Satisfied if the other major is another science discipline.</p> <p>D. Upper level: 42 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required for an overall total of 120 credits.</p> <p>F. Standing requirements: to graduate in an Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p>
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Honours Major/Minor BSc

The Honours BSc program described above may be pursued jointly with any Honours Minor program offered at Glendon. For further details on requirements, see the listings for specific Honours Minor programs. *(Note: The science requirement outside the major is not applicable to double major and major/minor programs where the second major or minor is a science discipline.)*

Honours Major/Minor Program

An Honours Major in biology may be combined with an Honours Minor in another subject area in an Honours Major/Minor BSc degree program. Possible subject combinations are listed under Undergraduate Degree Programs in the Faculty of Science Undergraduate Degree and Certificate Programs section.

Students may follow a stream within the Honours Major/Minor program in Biomedical Science (stream requirements are listed under the Biology Honours Major program). This stream may be combined with other approved science minors.

A. General education:

- non-science requirement: 12 credits;
- mathematics: [SC/MATH 1505 6.00](#), or six credits from [SC/MATH 1013 3.00](#), [SC/MATH 1014 3.00](#), [SC/MATH 1025 3.00](#);
- computer science: [LE/EECS 1520 3.00](#) or [LE/EECS 1530 3.00](#) or [LE/EECS 1540 3.00](#);
- foundational science: six credits from [SC/CHEM 1000 3.00](#) and [SC/CHEM 1001 3.00](#) (prerequisites for [SC/BIOL 2020 3.00](#) and [SC/CHEM 2020 3.00](#)) or [SC/PHYS 1410 6.00](#) or [SC/PHYS 1420 6.00](#) or [SC/PHYS 1010 6.00](#).

B. Major requirements:

Biology stream

- the program core as specified above (24 credits);

	<ul style="list-style-type: none"> • additional credits from biology courses, as required, for an overall total of at least 51 credits from biology courses, including at least 18 credits at the 3000 or higher level, of which at least 12 credits are at the 4000 level. • The course requirements for the minor. <p>Biomedical Science Stream</p> <ul style="list-style-type: none"> • <u>SC/CHEM 1000 3.00</u> and <u>SC/CHEM 1001 3.00</u>; • one of <u>SC/PHYS 1410 6.00</u> or <u>SC/PHYS 1420 6.00</u> or <u>HH/PSYC 1010 6.00</u>; • the program core, as specified above (24 credits), including <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>), <u>SC/BIOL 2020 3.00</u>, <u>SC/BIOL 2021 3.00</u>, <u>SC/BIOL 2040 3.00</u>, <u>SC/BIOL 2070 3.00</u>, <u>SC/CHEM 2020 3.00</u> and <u>SC/CHEM 2021 3.00</u>; a minimum of one of <u>SC/BIOL 2030 4.00</u> or <u>SC/BIOL 2060 3.00</u>; • a minimum of nine credits chosen from the following courses: <u>SC/BIOL 3060 4.00</u>; <u>SC/BIOL 3070 4.00</u>; <u>SC/BIOL 3100 2.00</u>; <u>SC/BIOL 3110 3.00</u>; <u>SC/BIOL 3130 3.00</u>; <u>SC/BIOL 3150 3.00</u>; <u>SC/BIOL 3150 4.00</u>; <u>SC/BIOL 3155 3.00</u>; <u>SC/BIOL 4010 3.00</u>; • additional biology credits from the following courses, as required, for an overall total of 51 biology credits: <u>SC/BIOL 2010 4.00</u>, <u>SC/BIOL 2030 4.00</u>, <u>SC/BIOL 2060 3.00</u>, <u>SC/BIOL 3010 3.00</u>, <u>SC/BIOL 3060 4.00</u>, <u>SC/BIOL 3070 4.00</u>, <u>SC/BIOL 3071 3.00</u>, <u>SC/BIOL 3100 2.00</u>, <u>SC/BIOL 3110 3.00</u>, <u>SC/BIOL 3120 3.00</u>, <u>SC/BIOL 3130 3.00</u>, <u>SC/BIOL 3140 4.00</u>, <u>SC/BIOL 3150 3.00</u>, <u>SC/BIOL 3150 4.00</u>, <u>SC/BIOL 3155 3.00</u>, <u>SC/BIOL 4010 3.00</u>, <u>SC/BIOL 4020 3.00</u>, <u>SC/BIOL 4030 3.00</u>, <u>SC/BIOL 4061 3.00</u>, <u>SC/BIOL 4110 4.00</u>, <u>SC/BIOL 4141</u>
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<p><u>Honours Major/Minor iBSc</u></p> <p>The Honours iBSc program described above may be pursued jointly with any Honours Minor program offered at Glendon. For further details on requirements, see the listings for specific Honours Minor programs. <i>(Note: The science requirement outside the major is not applicable to double major and major/minor programs where the second major or minor is a science discipline.)</i></p> <p><u>Honours Minor</u></p>	<p><u>3.00, SC/BIOL 4150 3.00, SC/BIOL 4151 3.00, SC/BIOL 4155 3.00, SC/BIOL 4200 3.00, SC/BIOL 4220 4.00, SC/BIOL 4270 3.00, SC/BIOL 4285 3.00, SC/BIOL 4290 4.00, SC/BIOL 4310 3.00, SC/BIOL 4320 3.00, SC/BIOL 4350 4.00, SC/BIOL 4360 4.00, SC/BIOL 4370 3.00, SC/BIOL 4380 3.00, SC/BIOL 4450 4.00, SC/BIOL 4510 3.00;</u></p> <ul style="list-style-type: none"> • within the 51 biology credits at least 18 credits must be at the 3000 level or higher, of which at least 12 credits must be at the 4000 level. This must also include a minimum of seven credits from 3000 level or higher biology courses with an associated laboratory component. <p>C. Science breadth: a total of 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. 15 of these 24 credits are satisfied by the General Education requirement. Satisfied if the minor is another science discipline.</p> <p>D. Upper level: 42 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required for an overall total of 120 credits.</p> <p>F. Standing requirements: to graduate in an Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p>
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The Honours Minor must be pursued jointly with any approved Honours BA, iBA, BSc or iBSc program which offers a major/minor option at Glendon. For further details on requirements, see the listings for specific Honours BA, iBA, BSc and iBSc programs.

Minor credits: students must complete at least 30 credits in biology, including:

- The 24 credits of core courses;

at least nine credits at the 3000 level or above, of which at least six credits at the 4000 level.

Honours Minor

- [SC/BIOL 1000 3.00](#) and [SC/BIOL 1001 3.00](#) (or [SC/BIOL 1010 6.00](#));
- at least 12 credits from biology courses at the 2000 level;
- at least nine credits from biology courses at the 3000 or higher level, normally including six credits at the 4000 level;
- additional credits from biology courses at the 2000 or higher level, as required for an overall total of at least 30 credits from biology courses.

Note: it is recommended that students interested in cell biology, genetics, molecular biology and biochemistry take the following courses: [SC/BIOL 1000 3.00](#) and [SC/BIOL 1001 3.00](#), [SC/CHEM 1000 3.00](#), [SC/CHEM 1001 3.00](#), [SC/BIOL 2020 3.00](#), [SC/BIOL 2021 3.00](#), [SC/BIOL 2040 3.00](#), [SC/BIOL 2070 3.00](#), [SC/CHEM 2020 3.00](#) and [SC/CHEM 2021 3.00](#), [SC/BIOL 1000 3.00](#) and [SC/BIOL 1001 3.00](#), [SC/CHEM 1000 3.00](#), [SC/CHEM 1001 3.00](#), [SC/BIOL 2020 3.00](#), [SC/BIOL 2021 3.00](#), [SC/BIOL 2040 3.00](#), [SC/BIOL 2070 3.00](#), [SC/CHEM 2020 3.00](#) and [SC/CHEM 2021 3.00](#), plus a minimum of nine additional credits from biology courses at the 3000 or higher level. For other areas of interest, students are advised to choose their 2000-level biology courses wisely, based on the prerequisites for the courses they wish to take at the 3000 or higher level. Check the course outlines in this publication for course prerequisites.

International Bachelor of Science

All Honours iBSc degree candidates must complete an international component in addition to the normal requirements of biology

	<p>and the BSc. For further information about the international bachelor of science, refer to the International bachelor of arts and International bachelor of science in the Faculty of Science programs of study section.</p> <p><i>Specialized Honours in Biology (Honours iBSc)</i></p> <p>A. General education:</p> <ul style="list-style-type: none">• non-science requirement: 12 credits (may be satisfied in whole or part by courses in the international component);• mathematics: SC/MATH 1505 6.00, or six credits from SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1025 3.00;• computer science: LE/EECS 1520 3.00 or LE/EECS 1530 3.00 or LE/EECS 1540 3.00;• foundational science: six credits from SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00 (prerequisites for SC/BIOL 2020 3.00 and SC/CHEM 2020 3.00) or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or SC/PHYS 1010 6.00. <p>B. Major requirements:</p> <ul style="list-style-type: none">• the program core as specified above (24 credits);• SC/BIOL 3100 2.00;• SC/BIOL 4000 8.00 or SC/BIOL 4000 3.00;• additional credits from biology courses, as required for an overall total of at least 62 credits from biology courses, including at least 18 credits at the 3000 or higher level, of which at least 12 credits are at the 4000 level. <p>In addition, the following must be completed for the international component:</p> <ul style="list-style-type: none">• a minimum of 12 credits of language study in one of the languages offered
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	<p>at York University;</p> <ul style="list-style-type: none">• a minimum of 12 credits of non-science courses with an international component (refer to sample list of courses in the section on international degrees), which will also serve to meet the non-science requirement of the general education component;• an additional six credits of language study or non-science international component courses, for a total of 30 credits;• one to two exchange terms abroad as a full-time student at an institution with which York University has a formal exchange agreement. <p>C. Science breadth: 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. 15 of these 24 credits are satisfied by the above requirements.</p> <p>D. Upper level: a minimum of 42 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required, for an overall total of 120 credits.</p> <p>F. Standing requirement: to declare Specialized Honours requires successful completion of at least 24 credits, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To proceed in each year of a Specialized Honours program requires a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed and a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed.</p> <p>To graduate in a Specialized Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 6.00 (B) over all biology courses completed, and a minimum</p>
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	<p>cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p> <p>Honours Major Program (iBSc)</p> <p>Students may follow a stream within the Honours Major program in biomedical science.</p> <p>A. General education:</p> <ul style="list-style-type: none">• non-science requirement: 12 credits (may be satisfied in whole or part by courses in the international component).• mathematics: SC/MATH 1505 6.00, or six credits from SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1025 3.00;• computer science: LE/EECS 1520 3.00 or LE/EECS 1530 3.00 or LE/EECS 1540 3.00;• foundational science: six credits from SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00 (prerequisites for SC/BIOL 2020 3.00 and SC/CHEM 2020 3.00) or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or SC/PHYS 1010 6.00. <p>B. Major requirements:</p> <p>Biology stream</p> <ul style="list-style-type: none">• the program core as specified above (24 credits);• additional credits from biology courses, as required, for an overall total of at least 45 credits from biology courses (42 credits if SC/CHEM 2020 3.00 and SC/CHEM 2021 3.00 SC/CHEM 2020 3.00 and SC/CHEM 2021 3.00 are chosen in the core); <p>Biomedical Science Stream (iBSc)</p> <ul style="list-style-type: none">• SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00;• one of SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or HH/PSYC 1010 6.00;
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	<ul style="list-style-type: none"> • the program core, as specified above (24 credits), including <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>), <u>SC/BIOL 2020 3.00</u>, <u>SC/BIOL 2021 3.00</u>, <u>SC/BIOL 2040 3.00</u>, <u>SC/BIOL 2070 3.00</u>, <u>SC/CHEM2020 3.00</u> and <u>SC/CHEM 2021 3.00</u>; a minimum of one of <u>SC/BIOL 2030 4.00</u> or <u>SC/BIOL 2060 3.00</u>; • a minimum of nine credits chosen from the following courses: <u>SC/BIOL 3060 4.00</u>; <u>SC/BIOL 3070 4.00</u>; <u>SC/BIOL 3110 3.00</u>; <u>SC/BIOL 3130 3.00</u>; <u>SC/BIOL 3150 3.00</u> or <u>SC/BIOL 3150 4.00</u>; <u>SC/BIOL 3155 3.00</u>; <u>SC/BIOL 4010 3.00</u>; • additional biology credits from the following courses, as required, for an overall total of 42 biology credits: <u>SC/BIOL 2010 4.00</u>, <u>SC/BIOL 2030 4.00</u>, <u>SC/BIOL 2060 3.00</u>, <u>SC/BIOL 3010 3.00</u>, <u>SC/BIOL 3060 4.00</u>, <u>SC/BIOL 3070 4.00</u>, <u>SC/BIOL 3071 3.00</u>, <u>SC/BIOL 3100 2.00</u>, <u>SC/BIOL 3110 3.00</u>, <u>SC/BIOL 3120 3.00</u>, <u>SC/BIOL 3130 3.00</u>, <u>SC/BIOL 3140 4.00</u>, <u>SC/BIOL 3150 3.00</u>, <u>SC/BIOL 3150 4.00</u>, <u>SC/BIOL 3155 3.00</u>, <u>SC/BIOL 4010 3.00</u>, <u>SC/BIOL 4020 3.00</u>, <u>SC/BIOL 4030 3.00</u>, <u>SC/BIOL 4061 3.00</u>, <u>SC/BIOL 4110 4.00</u>, <u>SC/BIOL 4141 3.00</u>, <u>SC/BIOL 4150 3.00</u>, <u>SC/BIOL 4151 3.00</u>, <u>SC/BIOL 4155 3.00</u>, <u>SC/BIOL 4200 3.00</u>, <u>SC/BIOL 4220 4.00</u>, <u>SC/BIOL 4270 3.00</u>, <u>SC/BIOL 4285 3.00</u>, <u>SC/BIOL 4290 4.00</u>, <u>SC/BIOL 4310 3.00</u>, <u>SC/BIOL 4320 3.00</u>, <u>SC/BIOL 4350 4.00</u>, <u>SC/BIOL 4360 4.00</u>, <u>SC/BIOL 4370 3.00</u>, <u>SC/BIOL 4380 3.00</u>, <u>SC/BIOL 4450 4.00</u>, <u>SC/BIOL 4510 3.00</u>; • within the 42 biology credits at least 18 credits must be at the 3000 level or higher, of which at least 12 credits must be at the 4000 level. This must also include a minimum of seven credits from 3000 level or higher
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	<p>biology courses with an associated laboratory component.</p> <p>In addition, the following must be completed for the international component:</p> <ul style="list-style-type: none">• a minimum of 12 credits of language study in one of the languages offered at York University;• a minimum of 12 credits of non-science courses with an international component (refer to sample list of courses in the section on international degrees), which will also serve to meet the non-science requirement of the general education component;• an additional six credits of language study or non-science international component courses, for a total of 30 credits;• one to two exchange terms abroad as a full-time student at an institution with which York University has a formal exchange agreement. <p>C. Science breadth: 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. 15 of these 24 credits are satisfied by the above requirements.</p> <p>D. Upper level: a minimum of 42 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required, for an overall total of 85 credits from science disciplines (including the major) and an overall total of 120 credits.</p> <p>F. Standing requirements: to graduate in an Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.</p> <p><i>Honours Major/Minor Program (iBSc)</i></p> <p>Students may follow a stream within the</p>
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	<p>Honours Major/Minor program in biomedical science (stream requirements are listed under the Biology Honours Major program). This stream may be combined with other approved science minors.</p> <p>A. General Education:</p> <ul style="list-style-type: none">• non-science requirement: 12 credits (may be satisfied in whole or part by courses in the international component);• mathematics: SC/MATH 1505 6.00, or six credits from SC/MATH 1013 3.00, SC/MATH 1014 3.00, SC/MATH 1025 3.00;• computer science: LE/EECS 1520 3.00 or LE/EECS 1530 3.00 or LE/EECS 1540 3.00• foundational science: six credits from SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00 (prerequisites for SC/BIOL 2020 3.00 and SC/CHEM 2020 3.00), or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or SC/PHYS 1010 6.00. <p>B. Major requirements:</p> <p>Biology stream</p> <ul style="list-style-type: none">• the program core as specified above (24 credits);• additional credits from biology courses, as required, for an overall total of at least 45 credits from biology courses (42 if SC/CHEM 2020 3.00 and SC/CHEM 2021 3.00 are chosen in the core), including at least 18 credits at the 3000 or higher level, of which at least 12 credits are at the 4000 level;• the course requirements for the minor. <p>Biomedical science stream</p> <ul style="list-style-type: none">• SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00;• one of SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or HH/PSYC 1010 6.00;
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	<ul style="list-style-type: none"> • the program core, as specified above (24 credits), including <u>SC/BIOL 1000 3.00</u> and <u>SC/BIOL 1001 3.00</u> (or <u>SC/BIOL 1010 6.00</u>), <u>SC/BIOL 2020 3.00</u>, <u>SC/BIOL 2021 3.00</u>, <u>SC/BIOL 2040 3.00</u>, <u>SC/BIOL 2070 3.00</u>, <u>SC/CHEM 2020 3.00</u> and <u>SC/CHEM 2021 3.00</u>; a minimum of one of <u>SC/BIOL 2030 4.00</u> or <u>SC/BIOL 2060 3.00</u>; • a minimum of nine credits chosen from the following courses: <u>SC/BIOL 3060 4.00</u>; <u>SC/BIOL 3070 4.00</u>; <u>SC/BIOL 3110 3.00</u>; <u>SC/BIOL 3130 3.00</u>; <u>SC/BIOL 3150 3.00</u> or <u>SC/BIOL 3150 4.00</u>; <u>SC/BIOL 3155 3.00</u>; <u>SC/BIOL 4010 3.00</u>; • additional biology credits from the following courses, as required, for an overall total of 42 biology credits: <u>SC/BIOL 2010 4.00</u>, <u>SC/BIOL 2030 4.00</u>, <u>SC/BIOL 2060 3.00</u>, <u>SC/BIOL 3010 3.00</u>, <u>SC/BIOL 3060 4.00</u>, <u>SC/BIOL 3070 4.00</u>, <u>SC/BIOL 3071 3.00</u>, <u>SC/BIOL 3100 2.00</u>, <u>SC/BIOL 3110 3.00</u>, <u>SC/BIOL 3120 3.00</u>, <u>SC/BIOL 3130 3.00</u>, <u>SC/BIOL 3140 4.00</u>, <u>SC/BIOL 3150 3.00</u>, <u>SC/BIOL 3150 4.00</u>, <u>SC/BIOL 3155 3.00</u>, <u>SC/BIOL 4010 3.00</u>, <u>SC/BIOL 4020 3.00</u>, <u>SC/BIOL 4030 3.00</u>, <u>SC/BIOL 4061 3.00</u>, <u>SC/BIOL 4110 4.00</u>, <u>SC/BIOL 4141 3.00</u>, <u>SC/BIOL 4150 3.00</u>, <u>SC/BIOL 4151 3.00</u>, <u>SC/BIOL 4155 3.00</u>, <u>SC/BIOL 4200 3.00</u>, <u>SC/BIOL 4220 4.00</u>, <u>SC/BIOL 4270 3.00</u>, <u>SC/BIOL 4285 3.00</u>, <u>SC/BIOL 4290 4.00</u>, <u>SC/BIOL 4310 3.00</u>, <u>SC/BIOL 4320 3.00</u>, <u>SC/BIOL 4350 4.00</u>, <u>SC/BIOL 4360 4.00</u>, <u>SC/BIOL 4370 3.00</u>, <u>SC/BIOL 4380 3.00</u>, <u>SC/BIOL 4450 4.00</u>, <u>SC/BIOL 4510 3.00</u>; • within the 42 biology credits at least 18 credits must be at the 3000 level or higher, of which at least 12 credits must be at the 4000 level. This must also include a minimum of seven credits from 3000 level or higher
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	<p>biology courses with an associated laboratory component;</p> <ul style="list-style-type: none"> • the course requirements for the minor. <p>In addition, the following must be completed for the international component:</p> <ul style="list-style-type: none"> • a minimum of 12 credits of language study in one of the languages offered at York University; • a minimum of 12 credits of non-science courses with an international component (refer to sample list of courses in the section on international degrees), which will also serve to meet the non-science requirement of the general education component; • an additional six credits of language study or non-science international component courses, for a total of 30 credits; • one to two exchange terms abroad as a full-time student at an institution with which York University has a formal exchange agreement. <p>C. Science breadth: a total of 24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above. On the biology stream, 15 of these 24 credits are satisfied by the General Education requirement. In the biomedical science stream this requirement is fully satisfied by the above requirements. Satisfied if the minor is another science discipline.</p> <p>D. Upper level: 42 credits at the 3000 level or above.</p> <p>E. Additional elective credits, as required, for an overall total of 120 credits.</p> <p>F. Standing requirements: to graduate in an Honours program requires successful completion of all Faculty requirements and departmental required courses, a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all biology courses completed, and a minimum cumulative credit-weighted grade point average of 5.00 (C+)</p>
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<p>Course Substitutes Students are allowed to take BIOL courses at any campus to satisfy their degree requirements but all course substitutes must be approved by the program coordinator.</p>	<p>over all courses completed.</p> <p>Important note: some major/minor combinations will require students to complete more than 120 credits. Students are advised to consult minor requirements as early as possible and to plan their program of study in consultation with an academic adviser and the iBSc supplemental calendar. Courses taken to meet requirements of the minor can also count as international component and/or non-science requirements for the BSc General Education Requirement. In fact, in order to complete the degree requirements within the minimum number of credits some double counting will be necessary. Minors that can, with appropriate planning, be completed with the biology major within 120 credits include African studies, culture and expression, East Asian studies, environmental studies, European studies, geography, German studies, French studies, history, international development studies, Italian culture, Italian studies, Latin American and Caribbean studies, Portuguese studies, psychology, race, ethnicity and indigeneity, South Asian studies and Spanish.</p> <hr/>
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Support Statements (enclosed)



November 27, 2014

FACULTY OF SCIENCE

Department of Biology

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Chair

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Dear Professor Martel,

I am pleased to provide support for your proposal to introduce a Bilingual BSc in Biology program at Glendon. Thank you for including me and Dean Jayawardhana in the early stages of this proposal and for considering our recommendations. Your proposal was discussed at our Department Meeting in November and our members find merit in the proposal and find potential synergy between the proposed program at Glendon and the current program at Keele. I have shared a number of thoughts concerning the proposal with you and look forward to continuing to work with you to make the proposed Bilingual BSc in Biology program at Glendon a success.

Sincerely,

A handwritten signature in blue ink that reads "Sam Benchimol".

Samuel Benchimol, PhD
Professor and Chair
Department of Biology


cc: R. Jayawardhana, Dean, Faculty of Science



Memorandum

To: Dr. Jocelyn Martel
Program Coordinator, Environmental and Health Studies,
Glendon College

From: Catherine Davidson, Interim University Librarian

Date: December 16, 2014 

Subject: Proposal for a bilingual Bachelor of Science (BSc) in Biology

York University Libraries have excellent collections, expertise, and services that will support the proposed bilingual Bachelor of Science (BSc) in Biology at Glendon.

York University Libraries provide access to a breadth of resources in both physical and digital formats that support the core undergraduate curriculum in Biology, in addition to a number of sub-fields. As the attached Statement of Library Support outlines, Collection development will reflect future curricular requirements as they become known. While much of the core print resources in the field are primarily housed at Steacie Science & Engineering Library, students also have access to a wide array of relevant materials in electronic format, including encyclopedias, monographs, handbooks, and journals.

The strength of the biology collection is enhanced through the Libraries' services that assist students with accessing the range of resources available. Reference assistance is offered in Frost Library and online in both French and English, and students can access English-language reference services in any of the other Libraries. In addition to offering workshops that provide a general introduction to Frost Library, librarians are available to deliver course-specific instruction within a lecture or lab setting. In these cases, instruction is closely tailored to reflect the content and assignments of the specific course. The Learning Commons, physically located at Scott Library, provides an array of in-person services; those are complemented by their online counterparts through SPARK - , the Student Papers and Academic Research Kit which can help build students' research, writing, and learning skills.

In conclusion, the Libraries are well-positioned to support the proposed program, and will look forward to working with faculty to ensure that resources support existing and new curriculum within the field.

cc: Dany Savard, Acting Head, Leslie Frost Library
Ilo Maimets, Head, Steacie Science & Engineering Library
Adam Taves, Acting Associate University Librarian, Collections & Research



York University
Schulich School of Business

Proposal to Revise
Master of Accounting Program

September 2014
Revised January 29, 2015

1. **Program:** Master of Accounting (MAcc)
 2. **Degree Designation:** MAcc
 3. **Type of Modification:** Changes to program requirements / content that affects the learning outcomes & Addition of Diploma options
 4. **Effective Date:** May 2015
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5. **Rationale for the proposed changes**

The Master of Accounting was designed to give holders of honours bachelor degrees the academic training required to pursue a professional designation in accountancy. One stream of the MAcc –the CA stream- was accredited by the Institute of Chartered Accountants of Ontario and allowed successful graduates entry into the professional education program for Chartered Accountants (CAs). The other stream of the MAcc –the Management Accounting Information Stream provided students with academic training suitable for pursuing the Certified Management Accountant (CMA) designation although CMA accreditation had not been pursued.

In 2013, the CA and the CMA bodies amalgamated under the umbrella organization CPA Canada, creating a new professional designation - the Chartered Professional Accountants (CPA)¹ which introduced two significant changes to the certification program for professional accountants. Firstly, there has been an expansion in the fields of expertise beyond the traditional areas of assurance and tax. Secondly, there has been a recalibration of the relative roles between the profession and academic programs in the education and training of professional accountants. That is whereas before academic programs were seen as merely providing the prerequisite learning for admission into the professional education program, under the new arrangement through the process of accreditation, some graduate programs are recognized for their ability to deliver all or part of the professional educational program. As a consequence, the Master of Accounting program needs to be redesigned to incorporate the added fields of expertise within the discipline of accountancy as well as the areas of advanced accountancy education previously undertaken within the CPA's professional educational program.

The accreditation received by CPA Canada allows graduates of the revised MAcc to immediately write the qualifying examination for the profession. As additional education must be provided under the new professional requirements as compared to the existing program, four terms are required to fully educate an aspiring accountant. The offerings will hence be split into two programs. There will be:

- (i) A qualifying two-semester Diploma in Intermediate Accounting (DIAC, which will be subject to another proposal) that offers graduate business courses to non-business graduates and graduates of non-accredited business programs. Successful completion of the diploma would satisfy the requirements for admission with advanced standing into Term 2 of the revised MAcc; and
- (ii) A revised version of the MAcc, which is geared towards graduates from accredited business programs. The program can be completed either after Term 2 with a Type 1 Diploma in Advanced Accounting (which will be subject to another proposal), or with the Master of

¹ In 2014 Canada's third recognized professional accounting body -the Certified General Accountants (CGA)- joined the unification scheme

Accounting after Term 3. When terminating their education with the Advanced Accounting diploma (DAAC), graduates may complete the professional training program offered by the CPA; graduates with the Masters degree may proceed directly to the final qualifying exam of CPA Canada (called the Common Final Exam).

The School of Administrative Studies (SAS) in the Faculty of LA&PS has submitted a proposal for a new Type 3 Graduate Diploma in Professional Accounting motivated by the same changes in the profession. The SAS diploma essentially covers what is offered in Term 2 of the revised MAcc – that is, the specialized electives of the CPA program – albeit in a different fashion. Whilst the SAS diploma and the Schulich Diploma in Advanced Accounting do overlap, they will not compete as the Schulich Diploma in Advanced Accounting will attract students from a different market segment, as students benefit from completing the diploma in the Faculty in which they have completed their Undergraduate studies. On the other hand, as the Schulich prequalifying Diploma in Intermediate Accounting will introduce students to accounting and related business subjects, it will not overlap with the SAS diploma.

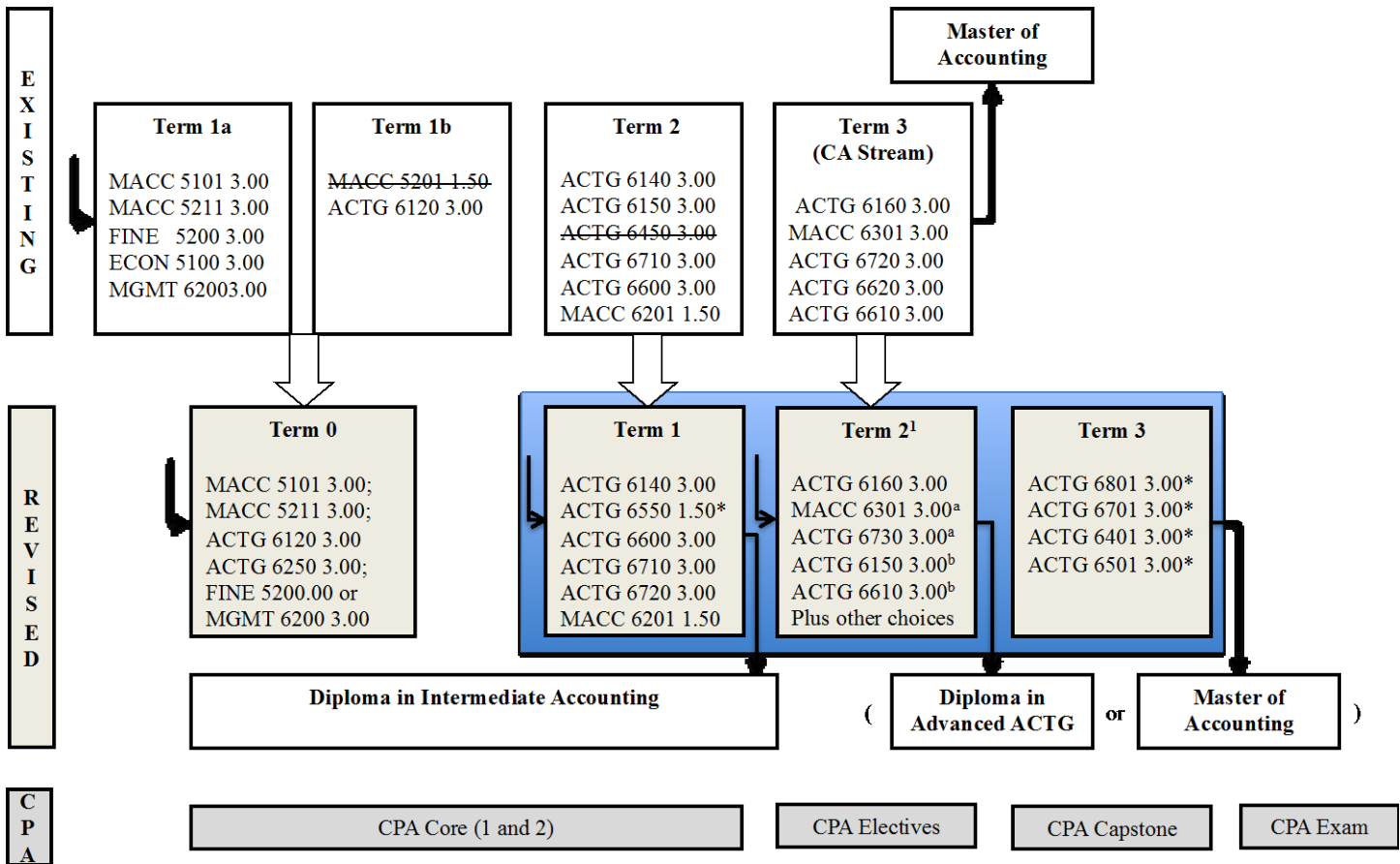
6. General Description of the proposed changes.

Two changes are proposed: a change in the program's course structure (resulting in a change to the overall number of credits required) and a change to admissions requirements.

Changes in Course Structure

The graphic in Figure 1 shows the equivalencies between the existing MAcc and the revised MAcc & Diploma in Intermediate Accounting, and how these programs relate to the CPA professional educational program.

Figure 1: Overview of Curricular Changes



The existing MAcc delivers 51-credit hours over a twelve-month period comprising three regular terms (Terms 1a, 2 and 3) plus a one-month intersession term (Term 1b). In essence terms 1a 1b and 2 of the existing MAcc will be split off into a prequalifying diploma – the Diploma in Intermediate Accounting – successful completion of which will be the entry requirement for graduates of non-business and non-accredited business programs into Term 2 of the revised MAcc. Terms 2 and 3 of the existing MAcc map onto Terms 1 and 2 of the revised MAcc, with the difference that four “concentrations” of two 3.00 credit courses each will be offered during Term 2, in addition to MACC 6301. Students have to select two of the four concentrations, consisting of 6.00 credits each.

Students in the program have the option to terminate their studies at the completion of Term 2 upon which they will be awarded a Type 1 Diploma in Advanced Accounting. Term 3 comprises four new integrative case-based courses that serve to satisfy the CPA capstone requirement. Term 3’s format of night and weekend classes is designed to facilitate a student internship, which initially will be optional and may become a mandatory requirement subsequent to program review. Students completing Term 3 will be awarded the Masters degree, but not the Diploma in Advanced Accounting.

As a result of these changes, the overall number of credits required to complete the MAcc (including Term 1 through Term 3) decreases from 51 to 42 (a minimum of 27 if the student has the maximum possible amount of advanced standing). The number of credits required to complete the Diploma in Advanced Accounting ranges from 15 to 30, depending on whether the student has advanced standing or not.

Changes in admission criteria

Previously, the MAcc was open to holders of 4 year degrees from a recognized University. Given that it was accredited by the Institute of Chartered Accountants of Ontario (ICAO) it was targeted at the following groups of graduates:

1. *Non-business degree graduates.* These are stream switchers who after completing their undergraduate education wish to pursue a career in accountancy by pursuing a professional designation.
2. *Business degree graduates of non-accredited institutions.* Graduates of programs accredited by the ICAO gained direct entry into the ICAO's professional educational program. As the ICAO had only awarded accreditation to 8 programs in Ontario (of which the Schulich MAcc was one), the MAcc provided an entry path into the ICAO's professional education program that would have otherwise been impossible for this category of students to access within a one year timeframe.

We will still be able to admit such candidates but expect that the program's main clientele will, in the future, be Schulich's BBA and iBBA graduates seeking to complete their CPA education. Such graduates, depending on the selection of courses within Schulich, would typically enter the MAcc in Term 1 or Term 2 (the latter with advanced standing for courses equivalent to those offered in Term 1). Business graduates from other CPA accredited programs may also enter but, due to the pipeline requirements communicated by the CPA, are less likely to do so. Graduates from non-business programs and non-accredited business programs would have to first complete the Diploma in Intermediate Accounting Fundamentals (with a minimum B average) before being admissible to the revised MAcc. As Term 2 of the Diploma in Intermediate Accounting (DIAC) is equivalent to Term 1 of the MAcc, successful DIAC graduates will obtain advanced standing for Term 1 of the MAcc and will enter the MAcc in Term 2. The revised MAcc therefore envisages three distinct cohorts as follows:

1. *Schulich BBA and iBBA accounting stream graduates:* Successful applicants will obtain advanced standing for Term 1 gain admission into Term 2 and complete the MAcc in 2 terms (8 months).
2. Graduates of *Schulich's (i)BBA non-accounting stream and other accredited programs* will be admitted into Term 1 and take the 3-term MAcc (12 months).
3. *Graduates of the Schulich Diploma in Intermediate Accounting.* These would be students holding non-business undergraduate degrees or non-accredited business/accounting undergraduate degrees. These students would complete Terms 0 and 1, upon whose successful completion they would be awarded the Diploma in Intermediate Accounting. Successful graduates will enter the MAcc in Term 2 and complete the program in two terms.

Table 1 provides an overview of the proposed changes, including the admissions requirements to the Diploma in Intermediate Accounting

Table 1: Overview of new Admissions Criteria

Entry Stage Entry Type	Requirements	Diploma in Intermediate Accounting (DIAC)	MAcc, Term 1	MAcc, Term 2
Current MAcc	Min. GPA Prerequisites Min GMAT/GRE Work Experience Min Language Other	n/a	B None 600/equivalent Recommended TOEFL/YUELI, etc. 2 letters of recommendation	n/a
Revised MAcc				
Non-business graduate Or Business graduate, (not CPA accredited) ²	Min. GPA Prerequisites Min GMAT/GRE Work Experience Min Language Other	B Economics, Finance or Law, Statistics 600/equivalent Recommended ² TOEFL/YUELI etc. 2 letters of recommendation	n/a	Successful completion of DIAC (min. B average)
Business graduate, CPA accredited (4-year degree)	Min. GPA Prerequisites Min GMAT/GRE Work Experience Min Language Other		B Econ, Stats, Finance or Law; Term 0 courses / equivalent (subject to course-by-course assessment) 600/equivalent; Recommended; TOEFL/YUELI etc; 2 letters of recommendation	B Econ, Stats, Finance or Law; DIAC / equivalent; 600/equivalent; Recommended; TOEFL/YUELI etc; 2 letters of recommendation
Exceptions for Schulich graduates	Prerequisites GMAT/GRE Min Language Other		ACTG 3110, ACTG 3000, MGMT 3100 (min B) Not required Not required No letters required	CPA-Path courses Not required Not required No letters required

7. Alignment between the program changes with University academic plans.

As the new CPA designation awards graduates of accredited post graduate accounting degrees (such as the MAcc and the Diploma in Advanced Accounting) significant advanced standing (rather than mere entry into) its professional educational program, the MAcc and the Diploma in Advanced Accounting will now become attractive programs to Schulich BBA and iBBA graduates – particularly accounting majors. By revising the MAcc and obtaining the maximum degree of advanced standing for accreditation offered by CPA Canada, and by offering the option of a Diploma in Advanced Accounting and obtaining from CPA Canada the maximum degree of advanced standing for diploma programs, we will capture the new demand for CPA-accredited post graduate accounting degrees amongst graduating BBAs and iBBAs. The increase in enrollment is expected to be significant and will support the strategic enrollment objectives of the University. Moreover, as the curriculum revisions build on key elements already in the program – interdisciplinarity, experiential learning and extensive practitioner engagement- the revised MAcc

² Three-year cycle undergraduate degrees from institutions that meet the criteria set forth in the Bologna Declaration may be acceptable as the equivalent of an undergraduate honours degree. Graduates with other a 3-year degrees may be admitted if they possess at least one year of work experience..

and Diploma in Advanced Accounting will be well aligned with the University’s academic plans to develop academically rigorous and professionally relevant post graduate degree programs.

8. Detailed outline of the changes to the program and impact on learning outcomes.

The learning objectives of the existing MAcc are enhanced in the revised MAcc with the expansion of electives in Term 2 and with the focus on knowledge integration and application in Term 3. Table 2 provides a detailed outline of changes to the program and the impact of those changes on the program’s learning objectives. Table 3 lists the expected learning outcomes.

Table 2: Detailed Changes in Curriculum

Existing MAcc	Revised MAcc	Impact on Learning Objectives
Term 1 (a & b)	This now maps onto the Diploma in Intermediate Accounting.	No change to previous learning objectives
Term 2	This now maps onto Term 1 of revised MAcc (refer to Figure 1 and Appendix 1)	No change to previous learning objectives
Term 3	This now maps onto Term 2 of revised MAcc with specialized electives being offered (refer to Figure 1 and Appendix 1) MACC 6301 Plus any two specialized areas <ol style="list-style-type: none"> 1. <u>Finance Elective</u>: ACTG 6310 , ACTG 6320 2. <u>Assurance Elective</u>: ACTG 6160, ACTG 6610 3. <u>Tax Elective</u>: ACTG 6730, ACTG 6150 4. <u>Performance Management Elective</u>: ACTG 6650 SGMT 6000 	Enhancement in: Depth and Breadth of knowledge. This is achieved by giving students the opportunity to specialize in any two of the following fields: finance, assurance, tax and performance evaluation
No Comparable Term	Term 3 revised MAcc (refer to Figure 1 and Appendix 1) ACTG 6801, ACTG 6701, ACTG 6401, ACTG 6501	Enhancement in: Level of Application & Knowledge; Professional Capacity & Autonomy; Communications Skills All the courses in Term 3 are case based and focus on integration and application of knowledge of all fields studied. An optional internship will further enhance these learning outcomes.

Table 3 Program Learning Outcomes

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6801	ACTG6701	ACTG6401	ACTG6501	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
1. Breadth and Depth of Knowledge																				
Have high levels of proficiency in all of the major practice areas of accountancy including: Performance Measurement and Financial Reporting; Audit and Assurance and Taxation	Students are required to take a minimum of 30.0 credit hours of courses that cover these four broad areas of accountancy practice. These courses are advanced in nature and build on prior knowledge in these fields	•	•	•	•	•	•			•	•	•	•	•			•	•		
Demonstrate a thorough knowledge and understanding of all of the standards that govern the production and audit of financial statements for public and private companies.	The advanced technical knowledge gained in these courses is further enhanced through 10.5 credit hours of case based courses which cover all of this technical material in an integrative way.	•		•			•	•		•	•	•	•					•		
Develop advanced knowledge in two specialist fields	Students take an additional 12 credit hours of electives, from two chosen fields of specialization (6 cr hrs each): Finance, Performance Management, Taxation and Assurance											•	•	•	•	•	•	•	•	•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6801	ACTG6701	ACTG6401	ACTG6501	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310	
2. Research and Scholarship																					
Can demonstrate their ability to conduct situation-based research using available financial and other information about business entities;	All required courses include an applied research component.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Can generate well-structured and formatted reports on the basis of this research;	All courses have at least one group research project, and some assignments require individual student research where originality and creativity are emphasized.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Can apply the results of academic research in accounting case situations;	Some courses, required readings include academic journal articles.	•	•				•	•	•		•	•	•		•			•			
Can demonstrate through relevant applications a general familiarity with the top scholarly outlets in the field.		•	•	•	•	•	•	•					•	•	•	•	•	•	•	•	

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6801	ACTG6701	ACTG6401	ACTG6501	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310	
3. Level of Application and Knowledge																					
Make sound decisions in complex situations by applying a mix of evidence, reason, and judgment while considering multiple perspectives	Through 13.5 credit hours of case courses students learn to apply and integrate the knowledge from the various sub-fields of professional accountancy to complex business situations.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Be able to apply their knowledge to novel applications and contexts including different organizations and industries	Case courses of increasing complexity develop students' proficiency in integrating and applying knowledge of these multiple fields to professional practice contexts.	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•		•	

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6801	ACTG6701	ACTG6401	ACTG6501	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
4. Professional Capacity/ Autonomy																				
Show the ability to respond effectively to the ethical dilemmas that accountants face;	In projects and assignments students are exposed to various scenarios in which the accountant is required to make informed decisions in complex decision environments	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Be able to apply ethical frameworks and professional standards to resolve them;	Students take 13.5 credit hours of case courses to develop their critical thinking skills. Ethical decision making is a central theme of all of the program's case based courses.						•	•	•		•	•			•		•			
Demonstrate the ability to act with integrity, transparency and in the public interest.	Ethics and corporate governance themes are covered in all Financial Reporting, Management Accounting, Audit, and Taxation courses. In addition Professional and Ethical Behaviour is a core element of ACTG 6801 Strategic Leadership Planning and Case Analysis	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6801	ACTG6701	ACTG6401	ACTG6501	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
5. Level of Communication Skills																				
Be able to write concise, well-structured and well researched reports;	The majority of the program's courses require students to write reports and make individual or group presentations of their findings.	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•
Demonstrate the ability to present and communicate their ideas clearly and effectively;	Written reports are evaluated on content and clarity of exposition. In the oral presentation of findings communication and presentation skills are honed.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Be able to make effective and professional presentations and produce professionally formatted presentation slides and reports.		•	•	•			•	•	•		•	•	•	•	•	•		•	•	•

Expected Learning Outcomes	How are Learning Objectives Achieved?	ACTG6140	ACTG6550	ACTG6600	ACTG6710	ACTG6720	MACC6201	MACC6301	ACTG6801	ACTG6701	ACTG6401	ACTG6501	ACTG6160	ACTG6610	ACTG6650	SGMT6000	ACTG6730	ACTG6150	ACTG6320	ACTG6310
6. Awareness of Limits of Knowledge																				
Demonstrate an awareness of the limitations of financial data as a basis for decision making	Case based teaching, will illustrate the limits of accounting as a basis of decision making and will emphasize the need for multiple perspectives in decision making.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
In realistic scenarios, can demonstrate their ability to distinguish between and resolve problems that can be solved using available knowledge despite insoluble issues that need to be managed.	In all courses students are exposed to the multiple theoretical perspectives that underpin debates with accounting audit and related fields	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

10. Consultation undertaken with relevant academic units..

The proposed changes do not materially impact on any other academic units within the School or the University. Consultations with the directors of the MBA and BBA/iBBA programs were undertaken. Schulich has also consulted with the Faculty of LA&PS.

11. Resource implications and how they are being addressed (e.g., through a reallocation of existing resources). If new/additional resources are required, provide a statement from the relevant Dean(s)/Principal confirming resources will be in place to implement the changes.

A total of 8 new 3-credit and one new 1.5-credit courses will be required for the Accounting Fundamentals diploma and Masters program. These 25.5 credits are offset by 22.5 credits in course retirements at the undergraduate and master's level, leaving the School with a net increase of 3.0 credits for the Masters degree and the planned Diplomas. Given the expected increase in enrolment in the program due to the change in the target demographic (an estimated 80-100 BBA/iBBA graduates per year will be eligible for entry into Term 2, and many more into Term 1), the marginal revenues will more than offset the marginal costs.

12. Changes in the delivery of the program.

There are no changes to the mode of delivery of the program.

13. Changes in the assessment of teaching and learning within the program changing?

No changes to the assessment of teaching and learning within the program.

14. Arrangements for accommodating students currently enrolled in the program will be accommodated.

Students currently enrolled in the program are due to complete their program requirements in April 2015. We will continue to offer courses specific to the existing MAcc until all such students have completed their studies. With respect to obtaining their professional designations, graduates of the existing MAcc will follow the transitional path identified by CPA Canada.

15. Side-by-side comparison of the existing and proposed program requirements as they will appear in the Undergraduate or Graduate Calendar.

Master of Accounting

Existing Calendar Copy (Change From):	Proposed Calendar Copy (Change To):
<p>The Schulich Master of Accounting (MAcc) is a 12-month full-time degree that provides comprehensive study in accounting and can lead to professional accounting certification. The program is designed for students with a 4-year undergraduate degree and is especially attractive to non-business graduates (such as social sciences, science or other professional studies) who have limited work experience</p> <ul style="list-style-type: none"> ▪ 4 year undergraduate degree from a recognized university. ▪ Minimum GPA equivalent to a B ▪ GMAT 600 or higher, with acceptable above-median verbal and quantitative scores ▪ English Proficiency. <ul style="list-style-type: none"> ○ Applicants whose first language is not English must submit evidence of English proficiency, with the exception of those who have studied for at least two years in a University where English is the language of instruction. ○ A minimum TOEFL score of 600 (paper-based) or 250 (computer-based), 100 (iBT), IELTS 7.0 or YELT score of Band 1 or equivalent is required. 	<p>The Master of Accounting (MAcc) is a professional degree program designed to develop students' academic and intellectual abilities in all fields of professional accountancy.</p> <p>The 12-month, 42 credit program is accredited by CPA Canada. Successful graduates will have acquired in-depth knowledge in all of the sub-disciplines that constitute the broad field of accounting and will have also deepened their expertise in two chosen areas. They may proceed to write the Common Final Examination immediately following graduation from the program.</p> <p>The program places heavy emphasis on developing students' critical thinking abilities and their capacity to operate in decision environments characterized by high degrees of ambiguity through applied case analysis. Cases also help to develop students' appreciation of multiple viewpoints and perspectives. This program is designed to provide a strong foundation for initial career placement (also through an optional internship in Term 3) and long-term career growth.</p> <p><u>Admission Requirements</u></p> <p>EITHER</p> <p>Successful completion of the Diploma in Intermediate Accounting (minimum B GPA)</p> <p>OR</p> <p>Applicants must hold a 4-year degree from a recognized university with a minimum B grade point average in the last two full years (or equivalent) of academic work.</p> <p>Applicants whose degrees are from programs that are <u>not accredited</u> by CPA Canada must first successfully complete the Schulich Diploma in Intermediate Accounting and graduate with a minimum B average.</p> <p>Applicants with a 4 year business degree from a CPA accredited program must have a minimum B average and must have completed Intermediate Financial Accounting 1, Financial Statement Analysis and Law (or their equivalents) in their programs.</p>

An acceptable score on all measures of either the GMAT or GRE is required. Scores older than five years are not accepted.

Applicants will include two letters of reference, one of which must be from their current or former professors.

Work experience is not required; however, strong internships or prior work experience are recommended.

Schulich's standard requirements pertaining to language capability apply.

Waivers and Advanced Standing

For graduates of the Schulich School of Business the following waivers apply:

- GMAT/GRE
- Letters of recommendation

Graduates from CPA-accredited business programs that have completed all Core 1 and Core 2 courses, and Diploma in Intermediate Accounting graduates may receive advanced standing for Term 1. Advanced standing may be granted on a case-by-case basis to graduates of other business programs.

Appendix 1 – Revised MAcc

MAcc Term 1	MAcc Term 2	MAcc Term 3
<p style="text-align: center;">Courses</p> <p>ACTG 6140 3.00 ACTG 6550 1.50* ACTG 6600 3.00 ACTG 6710 3.00 ACTG 6720 3.00 MACC 6201 1.50</p>	<p style="text-align: center;">Courses</p> <p>MACC 6301 3.00 <i>Plus</i> <i>Any one set of two electives:</i></p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center;">Assurance</p> <p>ACTG 6160 3.00 ACTG 6610 3.00</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center;">Finance</p> <p>ACTG 6310 3.00* ACTG 6320 3.00*</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center;">Performance Man</p> <p>ACTG 6650 3.00* SGMT 6000 3.00 &</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Tax</p> <p>ACTG 6730 3.00* ACTG 6150 3.00</p> </div>	<p style="text-align: center;">Courses</p> <p>ACTG 6801 3.00* ACTG 6701 3.00* ACTG 6401 3.00* ACTG 6501 3.00*</p>
<p>Entry Requirement: B grade in ACTG 3110 ACTG 3000 MGMT 3100</p>	<p>Advanced Standing given for Term 1 if Schulich BBA/iBBA grad has also taken (min. B average): MGMT1050; OMIS 2000; ECON 1000; FINE 2000; MGMT 3100; ACTG 2010; ACTG 2011; ACTG 2020; ACTG 3000; ACTG 3110; ACTG3120; ACTG 4200; ACTG 4400; ACTG 4600; ACTG 4710; ACTG 4720</p>	<p style="text-align: center;">Key</p> <p>* New Course & Existing Schulich Course new to the MAcc 1. Students seeking a career in public accounting will take the Assurance and Tax electives</p>

Appendix 2 – Master of Accounting / Diploma in Advanced Accounting Courses

Term 1

ACTG 6140 3.00 Intermediate Financial Accounting II

This is an extension of ACTG 6120 3.00 with emphasis on the liability of equity accounts. Major topics include: tax allocation, pensions, leases, capital transactions and financial statement analysis.

ACTG 6600 3.00 Auditing Standards and Applications

This course focuses on the standards and applications underlying the latest functions and responsibilities of external and internal auditors. The theory of audit evidence and certain basic techniques are used to provide an understanding of auditing methodology. The auditor's responsibility beyond the financial audit and current developments in auditing are also examined. Students may be expected to complete a research paper or project.

ACTG 6710 3.00 Introduction to Income Tax

The basic concepts and techniques of income taxation and applications to personal and corporate contexts are examined.

ACTG 6720 3.00 Advanced Income Tax

A continuation of ACTG 6710 3.00, this course concentrates in greater detail on the taxation of business income.

ACTG 6550 1.5 Advanced Management Accounting

This course focuses on managerial planning, performance, and control systems in organizations that direct the behaviour of corporate officers and managers, in order to achieve a specific goal. Different tools and techniques are reviewed including methods of incentivizing employee productivity, compliance, and overall performance assessment. The course emphasizes decision-making through the analysis of case studies and discussions.

MACC 6201 1.50 Multi-competency Case Analysis for Accountants

This course will build on the case analysis fundamentals learned and applied in the previous terms courses. Focusing on financial accounting, the students will work on integrating their analysis with other technical competency areas including taxation, audit and assurance, management accounting, finance and strategy and governance. In addition to the specific technical competency areas, case analysis considers the impact of the development, implementation and use of information systems for the management and processing of data in business settings.

Term 2

MACC 6301 3.00 Integrative Case Analysis for Accountants

This is the second of six case courses for the MAcc Program. This course requires the student to integrate knowledge obtained in the courses taken throughout the program and apply that knowledge to cases that incorporate all of the competency areas including financial reporting, strategy and governance, assurance, finance, management accounting, and taxation.

ACTG 6160 3.00 Advanced Financial Accounting

This course emphasizes accounting for international activities and inter-corporate investments. The application of accounting principles to case situations in specialized industries and non-profit organizations is also considered.

ACTG 6610 3.00 Advanced Auditing

This course extends students' knowledge in the area of auditing by examining the role of the profession in society today, evaluating current issues facing auditors, and building on their understanding of the general audit framework and its fundamental theories. It also examines specific audit topics such as legal liability, comprehensive auditing, fraud, special reports, future-oriented financial information, and environmental auditing.

ACTG 6320 3.00 Advanced Finance Topics

Students are exposed to more advanced, complex, and specialized decision making situations in the areas of cash management and portfolio investment, determination of the appropriate capital structure and cost of capital, and methods used to manage financial risk. The course also discusses financial considerations related to business acquisitions and companies in financial distress

ACTG 6310 3.00 Advanced Financial Statement Analysis and Valuation

This course deals with the many types of methodologies used to determine fair values of businesses, assets and liabilities. This course reviews many of the valuation methods used in practice. Valuations of businesses, tangible assets, intangible assets and liabilities are covered. In particular, valuations of businesses that are being acquired, sold, or liquidated are also addressed.

ACTG 6650 3.00 Strategic Performance Evaluation

Strategic Performance Evaluation places an emphasis on strategic planning, performance assessment, and cost containment systems in organizations. Using an in-depth strategic planning case analysis approach, the course examines cost control methodologies, performance measurement and reward systems, governance and ethics in private and non-profit entities.

SGMT 6000 3.00 Strategic Management

This course examines business and corporate strategy. The focus is on strategic management, the process of choosing and defining purposes and objectives, formulating and implementing a viable strategy and monitoring strategic performance. It deals with the organization in its totality and demonstrates how and why the various functions of business are interdependent and need to be coordinated if the organization is to perform effectively. The course elaborates on the applicability of the strategic management discipline to a variety of sizes and types of organizations.

ACTG 6730 3.00 Managerial Tax Planning

This course builds on ACTG 6710 and ACTG 6720. It explores how individual and corporate taxpayers identify and implement tax planning opportunities in an attempt to maximize after-tax incomes, subject to complying with tax laws, while achieving business or financial strategies.

ACTG 6150 3.00 Complex Financial Reporting Issues

This course applies concepts and knowledge learned in intermediate financial accounting courses to specialized industries and business and non-business sectors. The overall objective of the course is to develop an understanding of the stakeholders, and unique accounting and reporting needs of these contexts including banking, investments, real estate, insurance, mining, oil and gas, agriculture, technology, communications, transportation, entertainment, utilities, not for profit and public sector.

Term 3

ACTG 6701 3.00 Integrative Tax: Cases and Analysis

This course reviews the content of ACTG 6710 and ACTG 6720 using integrated individual and group cases that test the enabling and technical competencies required for the Chartered Professional Accountants' (CPA) Common Final Exam (CFE).

ACTG 6801 3.00 Strategic Leadership Planning & Case Analysis

Strategic Leadership Planning and Case Analysis is an integrated module in the CPA Canada qualification process. This course focuses on both strategic leadership and strategic management, including critical thinking, and ethical and professional behaviour. This course is highly participatory and interactive, and helps candidates ensure an integrative perspective is brought to decision-making

ACTG 6401 3.00 Advanced Integrative Case Analysis

This course builds on the previous case courses, and further develops students' problem-solving and decision making skills. Cases include both multi-competency and comprehensive examples, incorporating all technical competency areas (financial reporting, strategy and governance, management accounting, audit and assurance finance, and taxation and enabling). Students work on their communication skills and teamwork through both written reports and presentations.

ACTG 6501 3.00 Integrative Case Analysis – The Capstone

This is the capstone case course for the MACC. This course requires students to integrate knowledge obtained in the courses taken throughout the program and apply that knowledge to multi-competency and comprehensive cases.



Bachelor of Arts: Bachelor 90 Credit Degree in Professional Writing

1. Introduction/Rationale

The Writing Department proposes to create a 90-credit Bachelor of Arts program in Professional Writing to commence in the F/W 2015-2016 academic year.

This 90-credit degree is designed specifically as a delayed-entry program for students who have been admitted to the Honours Professional Writing program, have completed at least 24 credits at York and, for various reasons, are unable continue in the Honours degree. The proposed 90-credit option is constructed to mirror the requirements of the first three years of the Honours program to allow maximum flexibility for students moving between the two programs.

2. General Objectives of the Program

2.1 Provide a brief description of the general objectives of the program.

The proposed 90-credit degree option allows students who were previously in the honours degree program to graduate with a three year degree in their chosen field.

2.2 Describe how the general objectives of the program align with University and Faculty missions and academic plans.

By allowing students to graduate with a three year degree the following goals of the academic plan are fulfilled:

The Strategic Planning Framework for the Faculty of Liberal Arts & Professional Studies:

Strategic Goal I: A fully engaged student body committed to its own education.

Principle 6. A principal responsibility of the Faculty is to respond to the academic needs of its diverse student population including the specific needs of part-time and mature students.

a) The Faculty, through its departments/schools/colleges, should support initiatives to assist students in the development and pursuit of their career goals.

Strategic Goal III: Diverse, innovative, adaptive, disciplinary and interdisciplinary programs serving equally individual students and the greater community while fostering new knowledge.

Principle 14. The Faculty is committed to delivering academic programs of the highest quality.

c) The Faculty defines the quality of programs as much by the transformative effects they have on students (undergraduate and graduate alike) as by any other measure.

Principle 15. The Faculty is committed to the belief that those students who qualify for a university education have a right to pursue one.

b) The Faculty is dedicated to providing an undergraduate education of high quality to a large number of students whose choice of university is limited by personal circumstance.

c) The Faculty is committed to providing curricular opportunity for all its students, recognizing that not all will graduate with honours.

d) The Faculty commits to the rigorous assessment of the quality of undergraduate and graduate programs and student performance.

Principle 16. The Faculty is committed to providing its students with diverse programs in the Humanities, Social Sciences, and in Professional Studies.

f) In appraising existing and new programs, the Faculty will consider their potential for lasting value.

3. Need and Demand

The current program in Professional Writing offered by the Faculty of Liberal Arts & Professional Studies exists only as an Honours degree program. Despite the specific reasons for the establishment of the program on these terms, Honours-only programs present a number of minor but persistent obstacles to retention and to positive student experience. By creating a 90-credit degree option, the Faculty is endeavoring to create greater flexibility for current majors who may be adversely affected by Honours-only regulations. Such students fall into one of four subtypes of undergraduates:

1. Students who have maintained Honours Standing, completed 90 credits and wish to graduate with a 90-credit Bachelor of Arts degree. This is not a large population, but it does exist. While students in the vast majority of LA&PS programs have the option of departing with a degree in their chosen field after completing 90-credits, students in Professional Writing have no such option.
2. Students who have fallen below Honours Progression but wish to improve their standing and return to the 120-credit degree. Such students are “exited” by the Academic Decision process and find themselves installed in the English program as a default degree. Under Senate legislation, such students have the right to retake courses to improve their grades. However, it can be difficult for students registered as EN to enrol in PRWR or WRIT courses, due to CAS filters. As a result, students must appeal to the Writing Department for permission to enrol in the courses. Being enrolled in a 90-credit version of PRWR will eliminate the CAS exclusions and allow students to enrol in the courses they need.
3. Students who have fallen below Honours Progression but wish to graduate with a degree in Professional Writing rather than being required to retake courses or select another program. Such students can transfer into the 90-credit program and graduate with the degree of their choice.
4. Students who have been required to withdraw for a year as a result of academic struggles. Under current practice such students cannot return to LA&PS as Honours students, which may discourage them from returning to York and instead seek admission elsewhere.

4. Program Content and Curriculum

The proposed 90-credit program in Professional Writing is composed of existing courses that are consistently offered on a yearly basis. The 90-credit program will eliminate the three

streams (Book, Periodical and Institutional Communications) currently offered to students in the Honours program while retaining the core group of courses all majors are required to complete. (See Appendix A for proposed calendar copy)

Students must complete 36 credits in the Professional Writing major, including the following:

a) Required courses (24 credits)

**AP/WRIT 1003 6.00 Professional Writing: An Introduction
(offered yearly; 100 students)**

This course introduces the concepts, fields, and practices of professional writing. Concepts considered include creativity and the idea of writing, composition theories and practices, writing for different audiences, and critical analyses of professional writing modes and media. Students practice writing for different audiences and professional writing contexts.

**AP/WRIT 1004 3.00 Research for Professional Writers
(offered yearly; 100 students)**

A practical introduction to strategies for formulating research plans, gathering relevant and reliable information through appropriate research methods and from information retrieval systems, evaluating and organizing information, and presenting information effectively and responsibly. Course credit exclusion: AP/WRIT 2300 3.0 (prior to Fall 2014), AP/PRWR 2300 3.00 (prior to Fall 2012), AP/WRIT 3988 3.00. PRIOR TO FALL 2009: Course credit exclusions: AS/WRIT 2300 3.00, AK/WRIT 3988 3.00.

**AP/PRWR 2006 3.00 Fundamentals of Editing
(offered yearly; 100 students)**

The course addresses the problems of sorting and arranging information and of writing it up in a manner that is clear and comprehensible in limited spaces. Students edit their own work and the work of others, learning both to administer and accept criticism.

Course credit exclusions: None.

Prior TO FALL 2009: Course credit exclusion: AS/PRWR 3720 3.00.

**AP/PRWR 2007 3.00 Rhetoric
(Offered yearly; 100 students)**

This course examines classical forms and expanded contemporary views of rhetoric. The course establishes as its basis four categories of rhetoric: gestural, verbal, textural and visual, and explores similarities and differences among these in theory and practice in literary, communications, and historical contexts. Course credit exclusion: AP/PRWR 1007 3.0 (prior to Fall 2014), AP/EN 1007 3.00 (prior to Fall 2012).

**AP/WRIT 2003 6.00 Genre for Professional Writers
(Offered yearly; 125 students)**

Since genre determines most of the essential elements that a writer must consider and apply - including purpose, audience, form, style, voice, evidence, methodology, ethics and context; understanding genre is crucial for effective writing. This course explores these critical considerations of genre, and students apply these concepts to their own writing in multiple academic and professional writing genres.

**AP/WRIT 2004 3.0 Writing in Digital Cultures
(offered yearly; 100 students)**

This course develops students' critical writing, analysis, design, and implementation abilities in the digital world. Students will analyze the impact of digital products through current theory and

global issues, then design, write, and implement their own digital product. Areas of study include questions such as power, gender, audience, identity, language, accessibility, and knowledge construction.

b) 12 additional Professional Writing credits at the 3000-level:

5. Program Structure, Learning Outcomes and Assessment

DEPTH AND BREADTH OF KNOWLEDGE

a) understand and utilize the full breadth of the writing act

- 1003: study and practice varieties of the writing act across audiences and purposes
- 2003: assume multiple writing roles through multiple assignments of different genre of writing: Artist (personal narrative); Cultural Observer and Activist (personal essay); Historian and Journalist (interview-based article); Scholar (scholarly paper)
- 3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

b) evaluate critically the main theories and theorists that inform our understanding of the writing act

- 1300: analyze and discuss the strengths and weaknesses of the various language theories
- 2004: analyze and discuss the views of some of the theorists of digital writing
- 2003: discuss critically a wide range of theories and theorists
- 2007: identify and assess rhetorical strategies used in informational and persuasive presentations

c) understand the meaning and purposes of writing, historically and in the contemporary world

- 1003: examine the various forms of cultural production and reception, and the ethical and practical challenges associated with print, alternative media, social media and online or participatory journalism
- 1300: study the development of writing theories over the past century
- 2004: consider critically how online writing is fundamentally changing the writing act
- 2007: understand the great similarities between historical and contemporary writing and the differences in meaning and purpose of both
- 3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

d) apply new technologies appropriately to support the writing act

- 1004: learn to use appropriate technologies to locate sources in support of professional writing projects
- 2004: produce a multimodal *article*
- 3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies
- 3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

e) recognize that genre is grounded in and dependent on context, involving multiple audiences and serving various purposes

- 1003: write from multiple perspectives for a variety of audiences
- 2003: study and discuss the main contemporary genre theories and theorists
- 2006: emphasize the historical contingency of Standard Written English, its arbitrary character, and its importance as cultural capital

- 3710: study a *wide range of institutional genre including cover letters, press releases, reports, technical descriptions, technical explanations, and scriptwriting for presentations*
- 3820: identify and assess rhetorical strategies used in informational and persuasive presentations

f) understand role of audience, form, style, purpose, voice in various genres

- 1003: Students practice writing for different audiences and professional writing contexts
- 1300: study and discuss the main contemporary audience and voice theories and theorists
- 2003: consider varying audiences, forms, styles, purposes, and voices
- 2004: consider critically the evolving writer-audience relationship in online environments
- 2006: illuminate the foundational structures of the English language sentence and the deployment of those structures
- 3820: analyze different audiences and their communication needs; evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

KNOWLEDGE OF METHODOLOGY

a) demonstrate an understanding of the writing act as an epistemic and recursive process that arises from, and responds back to, various communities

1003: practice collaborative writing and communication

1300: study and evaluate the views of a number of prominent sociolinguistic theorists

2004: evaluate the roles and responses of various online writing communities

2006: recognize the possibilities and constraints of the communities for which one writes

3710: identify and understand various communities and their unique discursive demands including Business Writing, Technical Writing, Science Writing, and Writing for Presentations

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

b) develop a metacognitive understanding of one's own writing processes

1300: study and critique one's own writing using the psycholinguistic research on the writing process

c) evaluate critically, and apply appropriately, research findings on the writing act and processes

1300: consider and discuss critically the psycholinguistic research on the writing process

3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

d) conduct research that is purposeful, ethical and balanced

1004: research and write a script for a podcast on a contemporary issue

1004: conduct interview-based research

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

e) be familiar with a variety of appropriate research methods

1003: study and apply a number of research methods, both in theory and in practice:

witness testimony, cultural observation, historical documents, oral history, interviewing, and scholarly research.

2006: provide students with the techniques to analyze and the vocabulary to describe the syntactical structures of writing at the level of the phrase, clause, sentence and paragraph

f) analyze texts from multiple points of view

1003: consider model writings from multiple points of view

2006: provide students with the techniques to analyze and edit the syntactical structure of writing at the level of the phrase, clause, sentence and paragraph

2007: analyze, describe and produce texts with differing rhetorical purposes

3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

APPLICATION OF KNOWLEDGE

a) recognize and enact reading, writing and speaking as responsive social acts grounded in, and dependent on, context involving multiple audiences, and serving various purposes

1003: practice writing for different audiences and professional writing contexts.

2006: present and organize structured class discussion on an assigned course theme

2007: analyze, describe and produce texts with differing rhetorical purposes

3820: develop a writing plan that allows for the recognition of ethical, social, and time constraints

3820: identify and assess rhetorical strategies used in informational and persuasive presentations

b) be self-reflexive and engage in writing as a recursive process that includes research, drafting, reviewing, revising and editing

1003: study and apply multiple composition theories and practices

1300: apply the psycholinguistic research on the writing process to your own writing

2006: use peer editing and professor feedback to revise writing

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

c) be able to apply genre, purpose, audience, ethics and style in various professional writing environments

1003: write and rewrite prose to accord with changes in audience and purpose in an exam

2006: recognize that differing syntactical structures may better suit a given act of writing to one genre, purpose, audience and style

3710: understand how different types of writing directed to different audiences (job applications, press releases, bad news messages, reports to stakeholders, technical instructions for consumers, science explanations for lay readers, and presenters for general audiences) must consider all of the above elements

3820: analyze different audiences and their communication needs

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

d) recognize and analyze the forms and roles that research plays in determining and meeting project goals and users'/readers' needs

1004: examine the need for different forms of research for different projects

e) apply new technologies to support the writing act, and use appropriate media to convey text effectively

1004: research and write a script for a podcast on a contemporary issue

2004: create multimodal *articles*

3710: design pages effectively for a three-year report on a charity using design and imaging software

3710: present writing topics to the class using Prezi presentation software

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

f) evaluate critically and improve one's own written work and that of others

1003: learn to read and respond to other students' rough drafts effectively

1004: learn to read and respond to other students' rough drafts effectively

2003: learn to read and respond to other students' rough drafts effectively

2006: learn to read and respond to other students' rough drafts effectively

2006: recognize the ways in which one's own prose does and does not manage the standards of Standard Written English

3820: critique presentations using standard style and critique guides

3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

g) demonstrate ability to initiate, plan, draft, revise and complete writing projects

1003, 1004, 2003, 2004: include planning, drafting and revision in all writing projects

1003, 1004, 2003, 2004: revise writing based on peer-editing

COMMUNICATION SKILLS

a) be prepared to offer and accept feedback in constructive ways

1003, 1004, 2003, 2004: offer constructive comments on classmate's assignments

3820: critique presentations using a standard critique sheet

3820: demonstrate effective presentation delivery skills, suitably handling questions, interruptions, and hostility

b) read and listen actively in a context-appropriate way

1003, 2003: organize structured class discussion on specific issues arising in assigned class readings

1500: use the course wiki site to organize structured class discussion on an assigned class reading

3820: demonstrate effective presentation delivery skills, suitably handling questions, interruptions, and hostility

c) use evidence and persuasive appeals that are effective with various audiences, situations and purposes

2007: learn assess and use evidence within a variety of rhetorical forms and situations

3710: write exercises that describe, instruct, and define concepts and objects for expert and lay audiences

3820: identify and assess rhetorical strategies used in informational and persuasive presentations

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

d) design and compose texts for a range of expert and lay audiences

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

e) assess and be able to move between oral and written formats as appropriate

2006, 2007: recognize the separation between the requirements of formal written prose and the characteristic forms of oral expression

3710: present a topic succinctly and clearly to a general audience of classmates

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

3820: identify and assess rhetorical strategies used in informational and persuasive presentations

f) use appropriate conventions to increase the accessibility of communications for individuals with diverse abilities and backgrounds

2710: understand that fluency in Standard Written English is an essential communicative capacity

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

AWARENESS OF LIMITS OF KNOWLEDGE

a) learn to work within limits and constraints

1004, 2003: organize and effect class presentations within strict time limits

2003: progress in course assignments from direct experience to indirect experience, and learn to combine both

2006: learn that there are undecideables, that those expert in the field may parse the same sentence differently

3820: develop a plan that allows for the recognition of ethical, social, and time constraints

b) learn to accept the provisionality of writing at any given moment

2710: learn that grammatical correctness is both a temporary historical construction and not the final gauge of writing well

c) develop critical analyses of public, scholarly and personal issues based on research, observation, and reflection

1003: use the main composition theories to analyze course themes

3820: critique presentations using a standard critique sheet

d) be able to identify, pose and resolve novel problems

1004: learn to adapt to unexpected problems in the writing and production of a podcast

e) be able to integrate a range of knowledge in innovative ways

2004: learn to assess the fit of technologies available to audience and rhetorical purpose

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

AUTONOMY AND PROFESSIONAL CAPACITY

a) develop the habits and identity of a professional writer

1003: Students work collaboratively on a team project based in one of the fields of professional writing

1003: students complete portfolios of their work for assessment and learn how maintaining it can be valuable for gaining a professional identity

1004: research and prepare a script for a podcast on a contemporary issue

2003: complete weekly writing exercises

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

b) identify and assess opportunities for professional writing

2720: consider publishing opportunities and develop contacts in the professional writing business

c) create professional networks

3710: read about and discuss ways to create professional networks

3710: practice simulated job interviews

d) stay current in various professional fields

1004: learn to locate and use information about the fields of professional writing

1003: learn to identify the genres of professional writing

e) be able to initiate, plan, draft, revise and complete writing projects

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

f) learn to work within limits and constraints

3820: develop a plan that allows for the recognition of ethical, social, and time constraints

g) demonstrate the ability to work independently and to work collaboratively

3820: demonstrate effective participation and communication in a team-learning Environment

h) demonstrate the ability to use appropriate technologies collaboratively

1003: Students work collaboratively on a team project based in one of the fields of professional writing

2004: work collaboratively to produce a multimodal article

3820: demonstrate effective participation and communication in a team-learning environment

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

i) demonstrate sensitivity to the importance of context, purpose and audience on ethical choices

3820: develop a plan that allows for the recognition of ethical, social, and time constraints

j) understand ethical parameters in producing and distributing written texts

1004: learn the standards of academic integrity as they apply to research, production and distribution of professional writing

6. Admission Requirements

The 90-credit BA in Professional Writing is a delayed entry program. Students planning to apply to the program must have been admitted to the Honours degree program in Professional Writing and have completed at least 24 credits at York. Once admitted to the program, students must maintain a cumulative GPA of at least 4.00

7. Resources

This program will require no new resources. All of the required courses are offered on a yearly basis, normally with FT faculty, and on occasion by CLAs and contract faculty.

Table 1 – Listing of Faculty

Faculty Name & Rank	Home Unit	Area(s) of Specialization
Andrea McKenzie, Assistant Professor	Writing Department	Narrative theory, visual rhetoric
Stephanie Bell, Assistant Professor	Writing Department	Writing pedagogy, digital writing
Kim Ian Michasiw, Associate Professor	Writing Department	Grammar and style, literary theory
Duncan Koerber, Sessional Professor	Writing Department	Institutional writing, digital writing
John Spencer, Senior Lecturer	Writing Department	Composition theory, genre theory
Jan Rehner, Senior Lecturer	Writing Department	Genres, visual rhetoric
Geoffrey Huck, Associate Professor	Writing Department	Book editing and publishing, linguistics
Ros Woodhouse, Assistant Professor	Writing Department	Academic literacies, writing pedagogy
Ron Sheese, Associate Professor	Department of Psychology	Academic literacies, composition theory

8. Enrolment Projections

Students may only enter the 90-credit version of this degree by means of falling below the Senate standards for Honours Standing.

Experience suggests that fewer than 10% of students in any given year of Professional Writing fail to achieve Honour Standing. Moreover, a significant percentage of that 10% retake courses in order to raise their GPAs and return to Honours; thus, the enrolment projections for the next five years into the program is from 12-15 students per year.

Bachelor of Arts: Honours Minor in Professional Writing

1. Introduction/Rationale

The Writing Department proposes to create an Honours Minor BA in Professional Writing to commence in the F/W 2015-2016 academic year. The minor is intended to allow students across disciplines to enhance their degree programmes in the area of writing through study of the theory and practice of Professional Writing.

2. General Objectives of the Program

2.1 Provide a brief description of the general objectives of the program.

The proposed option allows students who enhance their discipline-specific programmes with substantive study of the theory and practice of Professional Writing to graduate with a minor in that field.

2.2 Describe how the general objectives of the program align with University and Faculty missions and academic plans.

By allowing students to graduate with an Honours minor in Professional Writing, the following goals of the academic plan are addressed:

The Strategic Planning Framework for the Faculty of Liberal Arts & Professional Studies:

Strategic Goal I: A fully engaged student body committed to its own education.

Principle 6. A principal responsibility of the Faculty is to respond to the academic needs of its diverse student population including the specific needs of part-time and mature students.

a) The Faculty, through its departments/schools/colleges, should support initiatives to assist students in the development and pursuit of their career goals.

Strategic Goal III: Diverse, innovative, adaptive, disciplinary and interdisciplinary programs serving equally individual students and the greater community while fostering new knowledge.

Principle 14. The Faculty is committed to delivering academic programs of the highest quality.

c) The Faculty defines the quality of programs as much by the transformative effects they have on students (undergraduate and graduate alike) as by any other measure.

Principle 15. The Faculty is committed to the belief that those students who qualify for a university education have a right to pursue one.

b) The Faculty is dedicated to providing an undergraduate education of high quality to a large number of students whose choice of university is limited by personal circumstance.

d) The Faculty commits to the rigorous assessment of the quality of undergraduate and graduate programs and student performance.

Principle 16. The Faculty is committed to providing its students with diverse programs in the Humanities, Social Sciences, and in Professional Studies.

b) The Faculty dedicates itself also to a range of undergraduate and graduate programs preparing students for entry into established and emergent professions.

f) In appraising existing and new programs, the Faculty will consider their potential for lasting value.

Principle 17. The Faculty is dedicated to establishing, fostering, and coordinating intellectual and institutional links between and among disciplines.

d) The Faculty commits itself to introducing students, in their first and second years, to fundamental critical learning skills, while also supporting their acculturation to the university experience.

3. Need and Demand

Writing ability is acknowledged as central to success in many academic and professional settings. Many students take Professional Writing courses as electives with the aspiration to improve their understanding of the writing process and their ability to write in the areas of interest to them. Some students complete several courses in the Writing Department while majoring in some other area, yet they would like to gain acknowledgement of their studies in Writing. We would like to offer the Honours Minor as a means of providing this acknowledgement. The greatest outside demand for Writing courses currently comes from students in the Administrative Studies programme; and we believe that once a minor in Professional Writing exists, students from many areas will appreciate the opportunity to combine our courses with their major area of study. All of our courses currently have enrollments from students outside the program – the number of such students ranges from a handful in a few of our upper-level courses to about 75 in our Grammar & Proofreading course.

4. Program Content and Curriculum

The proposed Honours Minor in Professional Writing is composed of existing courses that are consistently offered on a yearly basis. The minor will not require students to specialize in one of the three streams (Book, Periodical and Institutional Communications) currently offered to students in the Honours program; rather, it will allow students to select from among all the courses available to majors in the programme.

(See Appendix A for proposed calendar copy)

Students must complete 30 credits in the Professional Writing minor, including at least six credits at each of the 1000, 2000, 3000 and 4000 levels.

Required courses (3 credits)

AP/PRWR 2006 3.00 Fundamentals of Editing (offered yearly; 100 students)

The course addresses the problems of sorting and arranging information and of writing it up in a manner that is clear and comprehensible in limited spaces. Students edit their own work and the work of others, learning both to administer and accept criticism.

Course credit exclusions: None.

Prior TO FALL 2009: Course credit exclusion: AS/PRWR 3720 3.00.

5. Program Structure, Learning Outcomes and Assessment

Following is a listing of the Degree Level Expectations associated with the Professional Writing programme, together with examples of their implementation within specific programme courses.

DEPTH AND BREADTH OF KNOWLEDGE

a) understand and utilize the full breadth of the writing act

1003: study and practice varieties of the writing act across audiences and purposes

2003: assume multiple writing roles through multiple assignments of different genre of writing: Artist (personal narrative); Cultural Observer and Activist (personal essay); Historian and Journalist (interview-based article); Scholar (scholarly paper)

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

b) evaluate critically the main theories and theorists that inform our understanding of the writing act

1300: analyze and discuss the strengths and weaknesses of the various language theories

2004: analyze and discuss the views of some of the theorists of digital writing

2003: discuss critically a wide range of theories and theorists

2007: identify and assess rhetorical strategies used in informational and persuasive presentations

c) understand the meaning and purposes of writing, historically and in the contemporary world

1003: examine the various forms of cultural production and reception, and the ethical and practical challenges associated with print, alternative media, social media and online or participatory journalism

1300: study the development of writing theories over the past century

2004: consider critically how online writing is fundamentally changing the writing act

2007: understand the great similarities between historical and contemporary writing and the differences in meaning and purpose of both

3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

d) apply new technologies appropriately to support the writing act

1004: learn to use appropriate technologies to locate sources in support of professional writing projects

2004: produce a multimodal *article*

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

e) recognize that genre is grounded in and dependent on context, involving multiple audiences and serving various purposes

1003: write from multiple perspectives for a variety of audiences

2003: study and discuss the main contemporary genre theories and theorists

2006: emphasize the historical contingency of Standard Written English, its arbitrary character, and its importance as cultural capital

3710: study a *wide range of institutional genre including cover letters, press releases, reports, technical descriptions, technical explanations, and scriptwriting for presentations*

3820: identify and assess rhetorical strategies used in informational and persuasive presentations

f) understand role of audience, form, style, purpose, voice in various genres

1003: Students practice writing for different audiences and professional writing contexts

1300: study and discuss the main contemporary audience and voice theories and theorists

2003: consider varying audiences, forms, styles, purposes, and voices
2004: consider critically the evolving writer-audience relationship in online environments
2006: illuminate the foundational structures of the English language sentence and the deployment of those structures
3820: analyze different audiences and their communication needs
3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

KNOWLEDGE OF METHODOLOGY

a) demonstrate an understanding of the writing act as an epistemic and recursive process that arises from, and responds back to, various communities

1003: practice collaborative writing and communication
1300: study and evaluate the views of a number of prominent sociolinguistic theorists
2004: evaluate the roles and responses of various online writing communities
2006: recognize the possibilities and constraints of the communities for which one writes
3710: identify and understand various communities and their unique discursive demands including Business Writing, Technical Writing, Science Writing, and Writing for Presentations
3820: create visual aids and/or handouts for presentations, using computer technology where appropriate
3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

b) develop a metacognitive understanding of one's own writing processes

1300: study and critique one's own writing using the psycholinguistic research on the writing process

c) evaluate critically, and apply appropriately, research findings on the writing act and processes

1300: consider and discuss critically the psycholinguistic research on the writing process
3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

d) conduct research that is purposeful, ethical and balanced

1004: research and write a script for a podcast on a contemporary issue
1004: conduct interview-based research
3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

e) be familiar with a variety of appropriate research methods

1003: study and apply a number of research methods, both in theory and in practice: witness testimony, cultural observation, historical documents, oral history, interviewing, and scholarly research.
2006: provide students with the techniques to analyze and the vocabulary to describe the syntactical structures of writing at the level of the phrase, clause, sentence and paragraph

f) analyze texts from multiple points of view

1003: consider model writings from multiple points of view

2006: provide students with the techniques to analyze and edit the syntactical structures of writing at the level of the phrase, clause, sentence and paragraph

2007: analyze, describe and produce texts with differing rhetorical purposes

3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

APPLICATION OF KNOWLEDGE

a) recognize and enact reading, writing and speaking as responsive social acts grounded in, and dependent on, context involving multiple audiences, and serving various purposes

1003: practice writing for different audiences and professional writing contexts.

2006: present and organize structured class discussion on an assigned course theme

2007: analyze, describe and produce texts with differing rhetorical purposes

3820: develop a writing plan that allows for the recognition of ethical, social, and time constraints

3820: identify and assess rhetorical strategies used in informational and persuasive presentations

b) be self-reflexive and engage in writing as a recursive process that includes research, drafting, reviewing, revising and editing

1003: study and apply multiple composition theories and practices

1300: apply the psycholinguistic research on the writing process to your own writing

2006: use peer editing and professor feedback to revise writing

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

c) be able to apply genre, purpose, audience, ethics and style in various professional writing environments

1003: write and rewrite prose to accord with changes in audience and purpose in an exam

2006: recognize that differing syntactical structures may better suit a given act of writing to one genre, purpose, audience and style

3710: understand how different types of writing directed to different audiences (job applications, press releases, bad news messages, reports to stakeholders, technical instructions for consumers, science explanations for lay readers, and presenters for general audiences) must consider all of the above elements

3820: analyze different audiences and their communication needs

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

d) recognize and analyze the forms and roles that research plays in determining and meeting project goals and users'/readers' needs

1004: examine the need for different forms of research for different projects

e) apply new technologies to support the writing act, and use appropriate media to convey text effectively

1004: research and write a script for a podcast on a contemporary issue

2004: create multimodal *articles*

3710: design pages effectively for a three-year report on a charity using design and imaging software

3710: present writing topics to the class using Prezi presentation software

3820: create visual aids and/or handouts for presentations, using computer

technology where appropriate

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

f) evaluate critically and improve one's own written work and that of others

1003: learn to read and respond to other students' rough drafts effectively

1004: learn to read and respond to other students' rough drafts effectively

2003: learn to read and respond to other students' rough drafts effectively

2006: learn to read and respond to other students' rough drafts effectively

2006: recognize the ways in which one's own prose does and does not manage the standards of Standard Written English

3820: critique presentations using standard style and critique guides

3820: evaluate the relevance and effectiveness of presentations made by organizations, agencies, government, and corporations

g) demonstrate ability to initiate, plan, draft, revise and complete writing projects

1003, 1004, 2003, 2004: include planning, drafting and revision in all writing projects

1003, 1004, 2003, 2004: revise writing based on peer-editing

COMMUNICATION SKILLS

a) be prepared to offer and accept feedback in constructive ways

1003, 1004, 2003, 2004: offer constructive comments on classmate's assignments

3820: critique presentations using a standard critique sheet

3820: demonstrate effective presentation delivery skills, suitably handling questions, interruptions, and hostility

b) read and listen actively in a context-appropriate way

1003, 2003: organize structured class discussion on specific issues arising in assigned class readings

1500: use the course wiki site to organize structured class discussion on an assigned class reading

3820: demonstrate effective presentation delivery skills, suitably handling questions, interruptions, and hostility

c) use evidence and persuasive appeals that are effective with various audiences, situations and purposes

2007: learn assess and use evidence within a variety of rhetorical forms and situations

3710: write exercises that describe, instruct, and define concepts and objects for expert and lay audiences

3820: identify and assess rhetorical strategies used in informational and persuasive presentations

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

d) design and compose texts for a range of expert and lay audiences

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

e) assess and be able to move between oral and written formats as appropriate

2006, 2007: recognize the separation between the requirements of formal written prose and the characteristic forms of oral expression

3710: present a topic succinctly and clearly to a general audience of classmates

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

3820: identify and assess rhetorical strategies used in informational and persuasive presentations

f) use appropriate conventions to increase the accessibility of communications for individuals with diverse abilities and backgrounds

2710: understand that fluency in Standard Written English is an essential communicative capacity

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

AWARENESS OF LIMITS OF KNOWLEDGE

a) learn to work within limits and constraints

1004, 2003: organize and effect class presentations within strict time limits

2003: progress in course assignments from direct experience to indirect experience, and learn to combine both

2006: learn that there are undecideables, that those expert in the field may parse the same sentence differently

3820: develop a plan that allows for the recognition of ethical, social, and time constraints

b) learn to accept the provisionality of writing at any given moment

2710: learn that grammatical correctness is both a temporary historical construction and not the final gauge of writing well

c) develop critical analyses of public, scholarly and personal issues based on research, observation, and reflection

1003: use the main composition theories to analyze course themes

3820: critique presentations using a standard critique sheet

d) be able to identify, pose and resolve novel problems

1004: learn to adapt to unexpected problems in the writing and production of a podcast

e) be able to integrate a range of knowledge in innovative ways

2004: learn to assess the fit of technologies available to audience and rhetorical purpose

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

AUTONOMY AND PROFESSIONAL CAPACITY

a) develop the habits and identity of a professional writer

1003: Students work collaboratively on a team project based in one of the fields of professional writing

1003: students complete portfolios of their work for assessment and learn how maintaining it can be valuable for gaining a professional identity

1004: research and prepare a script for a podcast on a contemporary issue

2003: complete weekly writing exercises

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

b) identify and assess opportunities for professional writing

2720: consider publishing opportunities and develop contacts in the professional writing business

c) create professional networks

3710: read about and discuss ways to create professional networks

3710: practice simulated job interviews

d) stay current in various professional fields

1004: learn to locate and use information about the fields of professional writing

1003: learn to identify the genres of professional writing

e) be able to initiate, plan, draft, revise and complete writing projects

3820: create presentations for a variety of audiences using various tools, techniques, and rhetorical strategies

f) learn to work within limits and constraints

3820: develop a plan that allows for the recognition of ethical, social, and time constraints

g) demonstrate the ability to work independently and to work collaboratively

3820: demonstrate effective participation and communication in a team-learning Environment

h) demonstrate the ability to use appropriate technologies collaboratively

1003: Students work collaboratively on a team project based in one of the fields of professional writing

2004: work collaboratively to produce a multimodal article

3820: demonstrate effective participation and communication in a team-learning environment

3820: create visual aids and/or handouts for presentations, using computer technology where appropriate

i) demonstrate sensitivity to the importance of context, purpose and audience on ethical choices

3820: develop a plan that allows for the recognition of ethical, social, and time constraints

j) understand ethical parameters in producing and distributing written texts

1004: learn the standards of academic integrity as they apply to research, production and distribution of professional writing

6. Admission Requirements

We know that many students entering the university feel that completing Writing courses would be helpful in meeting their academic and career goals. Any such students majoring in an existing Honours programme and maintaining a 5.0 grade point average would be admitted to the Honours Minor in Professional Writing.

7. Resources

This program will require no new resources. All of the required courses are offered on a yearly basis, normally with FT faculty, and on occasion by CLAs and contract faculty.

Table 1 – Listing of Faculty

Faculty Name & Rank	Home Unit	Area(s) of Specialization
Andrea McKenzie, Assistant Professor	Writing Department	Narrative theory, visual rhetoric
Stephanie Bell, Assistant Professor	Writing Department	Writing pedagogy, digital writing
Kim Ian Michasiw, Associate Professor	Writing Department	Grammar and style, literary theory
Duncan Koerber, Sessional Professor	Writing Department	Institutional writing, digital writing
John Spencer, Senior Lecturer	Writing Department	Composition theory, genre theory
Jan Rehner, Senior Lecturer	Writing Department	Genres, visual rhetoric
Geoffrey Huck, Associate Professor	Writing Department	Book editing and publishing, linguistics
Ros Woodhouse, Assistant Professor	Writing Department	Academic literacies, writing pedagogy
Ron Sheese, Associate Professor	Department of Psychology	Academic literacies, composition theory

8. Enrolment Projections

We do not expect large changes in programme enrollments. We anticipate that the number of students declaring a minor will initially be about 25 per year. However, we also anticipate that the popularity of the minor may grow as it becomes established and known within the university.



90 Credit Bachelor of Arts Jewish Studies

1. Introduction/Rationale

The Department of Humanities proposes to create a 90-credit Bachelor of Arts program in Jewish Studies to commence in the F/W 2015-2016 academic year.

This 90-credit degree is designed to be a delayed-entry program for students who have been admitted to the Honours Jewish Studies program, have completed at least 24 credits at York and, for various reasons, are unable continue in the Honours degree. The proposed 90-credit option was constructed to closely mirror the requirements of the Honours program to allow maximum flexibility for students moving between the two programs.

2. General Objectives of the Program

2.1 Provide a brief description of the general objectives of the program.

The proposed 90-credit degree option allows students who were previously in the honours degree program or who never began it to graduate with a three year degree in their chosen field. In creating a 90-credit non-Honours major, Jewish Studies is following the example of many other programs at the university. For example, Religious Studies, Classical Studies and Hellenic Studies, all programs housed in the Department of Humanities, and also the Humanities major itself are available both in 90-credit and in 120-credit formats.

The Jewish Studies major is intended to develop students' critical skills at the same time that it acquaints them with the field of Judaic Studies in all of its depth and breadth.

2.2 Describe how the general objectives of the program align with University and Faculty missions and academic plans.

By allowing students to graduate with a three year degree the following goals of the academic plan are fulfilled:

The Strategic Planning Framework for the Faculty of Liberal Arts & Professional Studies:

Strategic Goal I: A fully engaged student body committed to its own education.

Principle 6. A principal responsibility of the Faculty is to respond to the academic needs of its diverse student population including the specific needs of part-time and mature students.

a) The Faculty, through its departments/schools/colleges, should support initiatives to assist students in the development and pursuit of their career goals.

Strategic Goal III: Diverse, innovative, adaptive, disciplinary and interdisciplinary programs serving equally individual students and the greater community while fostering new knowledge.

Principle 14. The Faculty is committed to delivering academic programs of the highest quality.

c) The Faculty defines the quality of programs as much by the transformative effects they have on students (undergraduate and graduate alike) as by any other measure.

Principle 15. The Faculty is committed to the belief that those students who qualify for a university education have a right to pursue one.

b) The Faculty is dedicated to providing an undergraduate education of high quality to a large number of students whose choice of university is limited by personal circumstance.

c) The Faculty is committed to providing curricular opportunity for all its students, recognizing that not all will graduate with honours.

d) The Faculty commits to the rigorous assessment of the quality of undergraduate and graduate programs and student performance.

Principle 16. The Faculty is committed to providing its students with diverse programs in the Humanities, Social Sciences, and in Professional Studies.

f) In appraising existing and new programs, the Faculty will consider their potential for lasting value.

3. Need and Demand

The current program in Jewish Studies offered by the Faculty of Liberal Arts & Professional Studies exists only as an Honours degree program. While there may have been specific reasons for the establishment of the program on these terms, Honours-only programs present a number of minor but persistent obstacles to retention and the student experience. They also exclude those students who wish to graduate from university more quickly using the 90-credit degree option. By creating such an option, the Faculty is endeavoring to create greater flexibility for current majors who may be adversely affected by Honours-only regulations and also endeavoring to attract students who are pursuing a 90-credit degree by choice. Such students fall into one of three subtypes of undergraduates:

1. Students who wish to pursue a degree in Jewish Studies but do not wish or are unable for a variety of reasons to commit themselves to the greater demands of a 90-credit BA.
2. Students who have maintained Honours Standing, completed 90 credits and wish to graduate with a 90-credit Bachelor of Arts degree. This is not a large population, but it does exist. While students in the vast majority of LA&PS programs have the option of departing with a degree in their chosen field after completing 90-credits, students in Jewish Studies have no such option.
3. Students who have fallen below Honours Progression but wish to graduate with a degree in Jewish Studies rather than being required to retake courses or select another program. Such students can transfer into the 90-credit program and graduate with the degree of their choice.
4. Students who have been required to withdraw for a year as a result of academic struggles. Under current practice, such students cannot return to LA&PS as Honours students, which may discourage them from returning to York and instead seek admission elsewhere.

4. Program Content and Curriculum

The proposed 90-credit program in Jewish Studies is composed of existing courses that are consistently offered on a yearly basis. The 90-credit program simply reduces the amount of upper year courses needed while retaining the core group of courses all majors are required to complete.

Students must complete 30 credits in the Jewish Studies major, including the following:

a) Required courses (18 credits)

AP/HUMA 1880 6.00 The Jewish Experience: Symbiosis and Rejection (offered yearly; 75 students)

An examination of the interaction of Jews and gentiles in selected periods from antiquity through the 20th century. A case study in ethnic adaptation, the course seeks to understand how Jews sometimes adapted their lives to the world around them, and at other times withdrew into themselves, and how at certain times they exerted considerable influence on the people among whom they lived or who lived among them.

Note: This is an approved LA&PS General Education course

Course credit exclusion: AP/HUMA 2850 9.00 (prior to Fall 2014).

PRIOR TO FALL 2009: Course credit exclusions: AS/HUMA 2850 9.00, AS/HUMA 2851 3.00, AS/HUMA 2852 3.00.

AP/HUMA 3831 3.00 Torah and Tradition: Jewish Religious Expressions from Antiquity to the Present (offered yearly; 30 students)

This course offers a historical exploration of Jewish beliefs, institutions, and bodies of literature over the ages, emphasizing continuities and changes in religious expression within and across different places and times.

Course credit exclusions: None.

PRIOR TO FALL 2009: Course credit exclusion: AS/HUMA 3831 3.00.

- b) 12 credits in Hebrew (Note: students with proven proficiency in Hebrew will complete 12 credits from the list of courses where the language of instruction and/or texts are in Hebrew or in another Jewish language, for example, Yiddish)**
- c) 9 additional credits at the 3000 level chosen from the Jewish Studies list of courses from at least two categories.**

5. Program Structure, Learning Outcomes and Assessment

5.1 Provide a detailed description of the program learning outcomes and indicate how the program learning outcomes are appropriate and align with the relevant degree level expectations.

The Jewish Studies degree seeks to impart to students the following:

- the ability to engage in sustained analysis of a range of different literary, visual, and other cultural productions
- the ability to present ideas and arguments in a coherent and reasoned manner, both orally and in written works of a scholarly nature
- an understanding of the significance of interdisciplinarity in academic research,
- a familiarity with the contours of Jewish history, including its periodization, and with a variety of genres of cultural production ranging from classic religious and literary texts to works of the modern era that express aspects of the life of Jews as both individuals and as a collective

5.2 Address how the program curriculum and structure supports achievement of the program learning outcomes. For research-focused graduate programs, comment on the nature and suitability of the major research requirement(s) for degree completion. For undergraduate programs, comment on the nature and suitability of students' final-year academic achievement in the program.

By exploring Jewish cultures both as a self-contained system and in a dynamic relationship with other cultures, the Jewish Studies program prepares BA candidates for the following:

to demonstrate (i) an understanding of the different ways in which human cultures and their multiple forms of expression have developed historically (and continue to develop today) and (ii) a knowledge of and appreciation for the diversity of human experience in a range of cultures relating to different historical and geographical contexts

-identify the value systems that underlie cultural production, engage the interrelationships between diverse value systems, and, in approaching learning in a way that sustains appreciation for difference, develop an analysis of the human and of human community that has as its basis the dignity of all

-identify and question the assumptions, principles, ideas, and values that they themselves, as readers and researchers, bring to the analysis of texts in disciplines across the humanities and thus engage the very process of learning itself

-foster in themselves, in light of the above, a wide range of expertise in regard to disciplines across the humanities and an inclusive vision of what constitutes the human and human creativity that spans various cultures

-develop an appreciation of the diversity within a singular culture and how it is in constant, dynamic interaction with neighbouring cultures

5.3 Address how the methods and criteria for assessing student achievement are appropriate and effective relative to the program learning outcomes and Degree Level Expectations.

The Jewish Studies program has much in common with the Humanities program, of which it was formerly a part, in its overall objectives and design. The objectives of the Jewish Studies program are not attained through taking a particular course but through combinations of courses.

Jewish Studies courses are not only interdisciplinary but also interdependent in helping students to achieve the program's expectations and goals. What Jewish Studies courses do share in regard to methods and activities, however, is the emphasis on and commitment to text-centred, discussion oriented tutorials and seminars in the effort to make as intense and as meaningful as possible the investigation of the complexity and diversity of the human experience through the study of both the internal dynamics of a single civilization – one which spans 3 millennia, encompasses virtually the entire globe, and demonstrates tremendous internal discontinuities and diversity alongside great continuities and commonalities - and its interactions with other civilizations.

5.5 Describe the proposed mode(s) of delivery, including how it/they are appropriate to and effective in supporting the program learning outcomes.

The theme of the program's core course (HUMA 1880: the Jewish Experience) is that of symbiosis and rejection – cultural, economic, political, etc. - between Jews and non-Jews as well as among Jews of differing backgrounds and points of view from the origins of the Jewish tradition to the present day. It sets the tone for further courses in Jewish Studies, introducing students to fundamental questions in the Humanities as reflected in the Jewish tradition, and outlines the scholarly periodization of this tradition. Thereafter students are required to take the course HUMA 3831 (Torah and Tradition), which familiarizes them with foundational texts of the Jewish tradition and their interpretation and impact through the centuries. Students will take further courses from at least two of the following areas: Jews and Judaism from Antiquity to the Middle Ages; Jews and Judaism from Early Modern to Contemporary Studies; Jewish Literature, Culture, and the Arts; Jewish History and Social Sciences; Classical Jewish Texts. The goal here is to expose students to the Jewish tradition from a variety of angles and in different time periods while asking many of the same questions -questions both particular to the study of Jewish civilization and questions that are broadly humanistic - and studying the responses of the tradition within different times and contexts and through different genres.

Students are also required to demonstrate linguistic and cultural competence in Hebrew or another language relevant to the Jewish tradition, e.g. Yiddish, Ladino.

Please see Appendix B for the Degree Level Expectations – Jewish Studies.

6. Admission Requirements

There are no admissions requirements for a student entering the 90-credit BA in Jewish Studies.

7. Resources

This program will require no new resources. All of the required courses are offered on a yearly basis, normally with FT faculty, and on occasion by CLAs and contract faculty.

Table 1 – Listing of Faculty

Faculty Name & Rank	Home Unit	Area(s) of Specialization
Yedida Eisenstat, Sessional Assistant Professor	Humanities	Rabbinic Interpretation

Martin Lockshin, Full Professor	Humanities	Rabbinic Interpretation
Keith Weiser, Associate Professor	Humanities	European Jewish History
Sara Horowitz, Associate Professor	Humanities	Jewish literature
Carl Ehrlich, Associate Professor	Humanities	Hebrew Bible
David Koffman, Assistant Professor	History	North American Jewish History
Ahouva Shulman, Associate Professor	DLLL	Hebrew language
Laura Wiseman, Assistant Professor	Education	Jewish education and Hebrew literature

8. Enrolment Projections

8.1 Indicate the anticipated implementation date (i.e. year and term of initial in-take), and provide details regarding the anticipated yearly in-take and projected steady-state enrolment target, including when steady-state will be achieved.

We hope to implement the 90-degree major in 2015-16. We expect that it will draw 10-15 students per year.

**Faculty of Liberal Arts and Professional Studies
York University**

Degree-Level Expectations for Programs

Program:	Jewish Studies
Degree Type:	BA
Degree(s):	Bachelor of Arts (90 credits)
Department/School:	LAPS
Submission Date:	9 December 2014

Instructions:

1. On page 1, please complete the information regarding:
 - the name of the program (e.g. Criminology; Public Administration; Sociology; etc.);
 - the degree type of the program (e.g. BA; BDEM; BAS; BHRM; BPA; BSW; etc.);
 - the degree options offered through the program (e.g. *Specialized Honours (120 credits); Honours (120 credits); Bachelor (90 credits); etc.*); and
 - the name of the Department/School that offers the program.
2. For each of the six (6) University Undergraduate Degree Level Expectations (UUDLEs) listed in the chart below, please:
 - a) define the relevant degree-level expectations (i.e. describe what is demonstrated by students who are awarded the degree);
 - b) describe the relevant program learning objectives/student learning outcomes for each degree-level expectation (i.e., what students should know and/or be able to do by the end of the program); and
 - c) align the relevant courses and assessment methods/activities with the program learning objectives/student learning outcomes. *Note: when a program has a long list of electives, the Unit may include the details on the specific requirement (i.e. students have to choose X courses from the list of Y electives) in the chart below and append the full list of applicable elective courses at the end of this document.*

	<p>a) Degree-Level Expectation <i>This degree is awarded to students who have demonstrated the following:</i></p>	<p>b) Program Learning Objectives (with assessment embedded in outcomes) <i>By the end of this program, students will be able to:</i></p>	<p>c) Appropriate Degree Requirement & Assessment <i>Align courses and assessment methods/activities with the program learning objectives.</i></p>
<p>1. Depth and Breadth of Knowledge</p>	<p>-the ability to engage in sustained analysis of a range of different literary, visual, and other cultural productions</p> <p>-the ability to present ideas and arguments in a coherent and reasoned manner, both orally and in written works of a scholarly nature</p> <p>-an understanding of the significance of interdisciplinarity in academic research,</p> <p>-a familiarity with the contours of Jewish history, including its periodization, and with a variety of genres of cultural production ranging from classic religious and literary texts to works of the modern era that express aspects of the life of Jews as both individuals and as a collective</p>	<p>-demonstrate (i) an understanding of the different ways in which human cultures and their multiple forms of expression have developed historically (and continue to develop today) and (ii) a knowledge of and appreciation for the diversity of human experience in a range of cultures relating to different historical and geographical contexts</p> <p>-identify the value systems that underlie cultural production, engage the interrelationships between diverse value systems, and, in approaching learning in a way that sustains appreciation for difference, develop an analysis of the human and of human community that has as its basis the dignity of all</p> <p>-identify and question the assumptions, principles, ideas, and values that they themselves, as readers and researchers, bring to the analysis of texts in disciplines across the humanities and thus engage the very process of learning itself</p> <p>-foster in themselves, in light of the above, a wide range of expertise in regard to disciplines across the humanities and an inclusive vision of what constitutes the human and human creativity that spans various cultures</p> <p>-develop an appreciation of the diversity within a singular culture and how it is in constant, dynamic interaction with neighbouring cultures</p>	<p>The Jewish Studies program has much in common with the Humanities program, of which it was formerly a part, in its overall objectives and design. The objectives of the Jewish Studies program are not attained through taking a particular course but through combinations of courses. Jewish Studies courses are not only interdisciplinary but also interdependent in helping students to achieve the program's expectations and goals. What Jewish Studies courses do share in regard to methods and activities, however, is the emphasis on and commitment to text-centred, discussion oriented tutorials and seminars in the effort to make as intense and as meaningful as possible the investigation of the complexity and diversity of the human experience through the study of both the internal dynamics of a single civilization – one which spans more than 3 millennia, encompasses virtually the entire globe, and demonstrates tremendous internal discontinuities and diversity alongside great continuities and commonalities - and its interactions with other civilizations.</p> <p>The theme of its Foundations course (HUMA 2850: the Jewish Experience) is that of symbiosis and rejection – cultural, economic, political, etc. - between Jews and non-Jews as well as among Jews of differing backgrounds and points of view from the origins of the Jewish tradition to the present day. It sets the tone for further courses in Jewish Studies, introducing students to fundamental questions in the Humanities as reflected in the Jewish tradition, and outlines the scholarly periodization of this tradition. Thereafter students are required to take the course HUMA 3831 (Torah and Tradition), which</p>

			<p>familiarizes them with foundational texts of the Jewish tradition and their interpretation and impact through the centuries, and six credits in each of 5 categories. These are Antiquity to the Middle Ages; Early Modern to Contemporary Studies; Literature, Culture, and the Arts; History and Social Sciences; Classical Jewish Texts. The goal here is to expose students to the Jewish tradition from a variety of angles and in different time periods while asking many of the same questions - questions both particular to the study of Jewish civilization and questions that are broadly humanistic - and studying the responses of the tradition within different times and contexts and through different genres.</p> <p>Students are also required to demonstrate linguistic and cultural competence in Hebrew and sometimes an additional language relevant to the Jewish tradition, e.g. Yiddish, Ladino.</p> <p>Please see the attached course calendar for an overview of the large number of courses offered toward the Jewish Studies major.</p>
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	a) Degree-Level Expectation <i>This degree is awarded to students who have demonstrated the following:</i>	b) Program Learning Objectives (with assessment embedded in outcomes) <i>By the end of this program, students will be able to:</i>	c) Appropriate Degree Requirement & Assessment <i>Align courses and assessment methods/activities with the program learning objectives.</i>
2. Knowledge of Methodologies	<p>-a knowledge of methodologies that span various disciplines and that will enable them to deal with the fundamental questions of what it means to be human, how we create value (and values), and how and why – or whether – those values are justified</p> <p>-an understanding of the evolving nature and subjectivity of human interpretations of texts deemed sacred or classical by a culture</p> <p>-competence in Hebrew and sometimes an additional language relevant to Jewish culture</p>	<p>-provide a critical analysis of how Jewish culture has historically encoded its beliefs and how it has transmitted them</p> <p>-ask cross-cultural questions in the attempt to find the best solutions to the social or political crises of our time and develop cross-cultural perspectives on historical, philosophical, political and aesthetic developments</p> <p>-understand, in regard to both their particularity and their interconnections, the various approaches to conceiving the human as found in literature, psychology, sociology, cultural studies, philosophy, theology...</p> <p>-take from the Humanities both the importance of and commitment to critical skills (critical thinking, reading, and writing)</p>	

	<p>a) Degree-Level Expectation <i>This degree is awarded to students who have demonstrated the following:</i></p>	<p>b) Program Learning Objectives (with assessment embedded in outcomes) <i>By the end of this program, students will be able to:</i></p>	<p>c) Appropriate Degree Requirement & Assessment <i>Align courses and assessment methods/activities with the program learning objectives.</i></p>
<p>3. Application of Knowledge</p>	<p>-qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring (i) the exercise of initiative, personal responsibility, and accountability in both personal and group contexts; (ii) working effectively with others; (iii) decision-making in complex contexts</p>	<p>-consider the ethics, concepts, and beliefs of the Jewish tradition</p> <p>-address the interplay between dominant and marginalized cultures and to appreciate the transformation a culture from one type into the other</p> <p>-consider the causes and nature of hatred and discrimination between groups in the hopes of developing strategies to challenge and overcome such emotions and practices</p> <p>-consider the effects of trauma on the development of a civilization as a collective and on its individual members</p>	

	a) Degree-Level Expectation <i>This degree is awarded to students who have demonstrated the following:</i>	b) Program Learning Objectives (with assessment embedded in outcomes) <i>By the end of this program, students will be able to:</i>	c) Appropriate Degree Requirement & Assessment <i>Align courses and assessment methods/activities with the program learning objectives.</i>
4. Communication Skills	<p>-the capacity to make reasoned arguments, both orally and in written form, and to present information in a coherent fashion to different types of audiences</p>	<p>-be critically responsible, in both their oral and written work, for the principles and values that they not only find in but also bring to the analysis of major texts – whether the text be an actual text, a work of art, a film, a piece of music, a conversation with another person (or even with oneself)</p> <p>-and thus be able to engage the terms and concepts of various kinds of discourse, including (as indicated above) literature, psychology, sociology, cultural studies, philosophy, theology...</p>	

	a) Degree-Level Expectation <i>This degree is awarded to students who have demonstrated the following:</i>	b) Program Learning Objectives (with assessment embedded in outcomes) <i>By the end of this program, students will be able to:</i>	c) Appropriate Degree Requirement & Assessment <i>Align courses and assessment methods/activities with the program learning objectives.</i>
5. Awareness of Limits of Knowledge	<p>-cognizance of the diversity of points of view regarding multiple facets of the Jewish tradition and the impossibility of demonstrating or disproving the absolute superiority or rectitude of any one interpretation of its origins, its sources of authority, its values, or its relevance for living in a complex society</p>	<p>-take into account, in both their oral and their written work, how Jewish culture uses different modes of communication for conveying its fundamental questions and beliefs</p> <p>-show an awareness of the way in which different texts, traditions, and schools of thought within Judaism interpret the world and a respect for the uniqueness of each</p> <p>-ascertain the way in which the Jewish tradition engages the quest for knowledge and truth and how it contributes to the development of other cultural traditions and, more broadly, to our knowledge and conception of humanity</p>	

	a) Degree-Level Expectation <i>This degree is awarded to students who have demonstrated the following:</i>	b) Program Learning Objectives (with assessment embedded in outcomes) <i>By the end of this program, students will be able to:</i>	c) Appropriate Degree Requirement & Assessment <i>Align courses and assessment methods/activities with the program learning objectives.</i>
6. Autonomy and Professional Capacity	<p>-qualities and transferable skills necessary for further study, employment, community involvement, and other activities requiring:</p> <p>(i) the exercise of initiative, personal responsibility, and accountability in both personal and group contexts</p> <p>(ii) the ability to work effectively with others</p> <p>(iii) a capacity for decision-making in complex contexts</p> <p>(iv) the ability to manage their own learning in a range of environments</p>	<p>-do original research and prepare original work in the classroom as they investigate a particular thesis or group of texts</p> <p>-engage not only their professors and fellow students but also scholars across academia on a wide range of practical and theoretical issues</p> <p>-create for themselves a strong conception of their own authority by formulating dialogical interconnections among diverse discourses, disciplines, cultures, and thinkers, rather than privileging the authority of one over that of others</p>	

Change to Program/Graduate Diploma Academic Requirements Proposal Template

1. Program/Graduate Diploma: MFAc (Masters of Financial Accountability)

2. Effective Session of Proposed Change(s): Fall 2015

3. Proposed Change(s) and Rationale

a) Summary of Significant Changes:

ADMISSIONS

• CHANGE IN ADMISSION FOCUS

Prior: Preference given to applicants with professional accounting designations and with prior graduate degrees

New: Admission eligibility is all business degrees (possessing some accounting content)

Rationale: This is paired with a corresponding change in curriculum focus recognizing that financial accountability is less an accounting concept than it is a management concept. The need for accountability is pervasive across all management sectors and the technical accounting content is actually minimal. All business students are thus welcome to apply. The new requirements also recognize that asking for post-baccalaureate credentials is unnecessarily restrictive and puts the MFAc out of step with other masters programs at York.

• CHANGE IN ADMISSION REQUIREMENTS

Prior: GPA of A- required for applicants with baccalaureate degrees

New: GPA of B required for applicants with baccalaureate degrees

Rationale: A survey was conducted of other graduate programs at York and in particular the graduate programs in business. B is the universal entry standard used at York.

Prior: The English language requirement for admission by ESL applicants is an IELTS score of 750 or equivalent.

New: The English language requirement for admission by ESL applicants is an IELTS score of 700 or equivalent. Applicants with a score of less than IELTS 750 or equivalent may be asked for a Skype interview to assess competency. Conditional admission may be granted based on simultaneous enrolment in a York YUELI program.

Rationale: Language proficiency exams are a useful but imprecise metric of communication skills. The new requirements add sufficient flexibility to the admissions process to ensure that promising scholars that are on the cusp have an opportunity to demonstrate their commitment to these skills.

• CHANGE IN FULL TIME VS PART TIME STUDY OPTIONS

Not a change, but rather a clarification. The MFAc has always allowed both full and part-time status. However, what constituted full time or part time study was not formally stated before. We now formally define part time study as one three-credit course per term and full time study is registration in two or three courses per term.

Rationale: To help students properly plan their program of studies

PROGRAM REQUIREMENTS

- **CHANGE IN OVERALL NUMBER OF CREDITS**

Prior: 30 (8 required + 2 electives)

New: 33 (9 required + 2 electives)

Rationale: This reflects improvements in the quality of the program by adding both an Intro course (GS/FACC 6000) and a capstone course (GS/FACC 6900) to create a more integrated program. The number of required courses grows from 8 to 9. These two courses were approved by FGS in 2012.

CURRICULUM

- **ELECTIVES NOW CAN BE DEEMED TO BE SPECIALIZATIONS**

Beginning in Fall 2015, additional electives will be offered within the MFAc such that students can declare their two elective courses to be a specialization. This will be helpful to students who want to focus their electives on a particular theme. Specializations do not qualify for transcript notations at York, but congratulatory letters sent to graduates by the Program Director will reference the specialization. This will facilitate self-marketing of expertise during job searches. Students still have the option of no specialization in their two electives.

The defined specializations will be:

1. **Accountability Reporting**
 - 2 courses from (GS/FACC 6100 03, GS/FACC 6240 03, GS/FACC 6400 03)
2. **Law & Governance**
 - 2 courses from (GS/FACC 6250 03, GS/FACC 6260 03)
3. **Public Sector Accountability**
 - 2 courses from (GS/FACC 6350 03, GS/FACC 6360 03)
4. **Ethics & Sustainability**
 - 2 courses from (GS/FACC 6150 03, GS/FACC 6160 03)

This requires 6 new course proposals (attached to this document). The other courses already exist.

Rationale: The MFAc has always included a two course elective component. However, enrolment growth now supports some degree of specialization with electives that will enhance the degree's attractiveness.

- **CHANGES TO COURSES AND CURRICULUM**

A thorough and comprehensive curriculum review of all existing courses has been undertaken. **Table 1** notes changes to existing courses made to ensure the MFAc curriculum is completely up to date and reflects latest developments in both theory and practice. **Table 2** notes new courses added to satisfy the new elective specializations. **Table 3** lists all course titles and short versions (40 character limit)

**TABLE 1
CHANGES TO EXISTING COURSES**

EXISTING COURSES	CHANGES
<p>GS/FACC 3.0 6000 03 - Introduction to Accountability and Governance</p> <p>GS/FACC 6900 03 - Synthesis of Theory and Practice in Accountability and Governance</p>	<p>No change in these 2 courses except 6900 is renumbered for consistency. All required courses will end in 00 and all elective courses will end in 70, 80 or 90. The nine required courses will now bear the numbers 6000, 6100, 6200, 6300, 6400, 6500, 6600, 6700 and 6800.</p> <p>New course number GS/FACC 6800 03 - Synthesis of Theory and Practice in Accountability and Governance</p> <p>The original program, which began in 2008, had neither an intro course nor a capstone course and thus suffered from a lack of integration. This was rectified in 2012 when these 2 courses were added to the Program.</p>
<p>GS/FACC 6100 03 - Advanced Financial Statement Analysis”</p>	<p>New Course Title GS/FACC 6870 03 - Advanced Techniques of Financial Analysis</p> <p>The new title removes the phrase “financial statements” to reflect a more managerial focus that extends beyond the financial statements. A more holistic approach to analysis is now employed.</p> <p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6120 03 - Corporate Responsibility & Ethics”</p>	<p>GS/FACC 6100 03 - Corporate Responsibility & Ethics</p> <p>No change in course name or content</p> <p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6140 03 - Performance Measurement Systems</p>	<p>GS/FACC 6200 03 - Performance Measurement Systems</p> <p>No change in course name or content</p> <p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6160 03 - Controls and Risk Management”</p>	<p>A change in focus from an accounting to a managerial perspective, requiring a name change to GS/FACC 6300 03 - Enterprise Risk Management</p> <p>This new name is widely used in the corporate world and carries more name recognition.</p>

<p>Old Course Description: Techniques to assess risk in the organization from the perspective of the accountant or the auditor.</p>	<p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p> <p>New Course Description: This course presents an integrated framework of risk management in organizations (ERM), analyzes risks that can be controlled and explains the control policies and procedures available to reduce risks.</p> <p>The change in course description reflects the change to a more managerial focus in the course.</p>
<p>GS/FACC 6180 03 - Research Methods</p> <p>Old Course Description: This course critically examines examples of published research in financial markets in order to gain an appreciation of financial accounting research. The course provides good preparation for a doctoral program in financial accounting.</p>	<p>New course title GS/FACC 6400 03 - Research Methods and Statistical Inference</p> <p>New Course Description: This course has four principal objectives. The first is to help students take a more structured and scientific approach to the evaluation of data. Managers are literally bombarded with data (the information overload problem) and must be able to filter and assess the quality of such data before inputting into managerial decision models. The ability to evaluate the quality of data and to make generalizations from it using the principles of statistical inference are critical skills for all managers. The second objective of the course is to show how risk and uncertainty can be incorporated into decision making using techniques such as Probability theory and Bayesian inference. The third objective to show how data is qualitatively evaluated using the principles of evidence. Managers should be adept in evaluating both the sufficiency and persuasiveness of evidence used in decision models. The fourth objective is to show students how to prepare a research proposal to address any business problem. This is obviously essential for students pursuing the major paper option, but any manager benefits from recognizing when sound methodological principles have been followed in researching a business question. Managers read and possibly rely on many research reports over their careers and it is important to be able to distinguish good research from weak research.</p> <p>The new course description adds the added requirement of statistical literacy to the existing mandate of research methodology.</p> <p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6200 03 - Advanced Theory for Financial Accountability</p>	<p>Course deleted</p> <p>Rationale: that although the course purported to teach theories of financial accountability this was not possible since there are no theories of financial accountability. Instead, it taught accounting theory and reviewed empirical studies in financial markets. The course had little to do with accountability.</p>

<p>GS/FACC 6220 03 - Corporate Governance & Financial Accountability</p>	<p>New course title and number GS/FACC 6500 03 - Corporate Governance</p> <p>Shorter title for parsimony</p> <p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6240 03 - Information Technology Governance and Monitoring Strategies</p>	<p>New course title and number GS/FACC 6880 03 - Information Technology Governance</p> <p>Shorter title for parsimony Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6400 03 - Earnings Management and Forensic Accounting</p>	<p>New course number GS/FACC 6890 03 - Earnings Management and Forensic Accounting</p> <p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6440 03 - Management and Control of E-Commerce Systems</p>	<p>Course deleted</p> <p>Rationale: The course was on the books since the MFAC inception but has never been developed or offered.</p>
<p>GS/FACC 6460 03 - Accountability Issues in the Public and Not for Profit Sectors</p>	<p>Change in course number and title GS/FACC 6600 03 - Accountability Issues in the Public Sector</p> <p>The not for profit sector is technically a subset of the public sector so the phrase is redundant</p>
<p>GS/FACC 6620 03 - Accounting and Finance Issues in Pension and Benefits</p> <p>Old Course Description: This a course examining the accounting issues associated with corporate pension funds and their unfunded liabilities. It is very technical and requires an extensive accounting background to take.</p>	<p>New course title and number GS/FACC 6700 03 - Executive Compensation</p> <p>New Course Description: Most modern management theories posit that principal drivers of managerial behavior are executive compensation schemes. It is also a common belief that compensation schemes tied to the bottom line and stock price lead to actions more in the manager's interest than the firm's interest. This course looks at these issues and identifies best practices to strengthen corporate governance and accountability in the organization through appropriate design of executive compensation schemes.</p> <p>The revised course description reflects the reality that executive compensation dominates all benefits in terms of impact on accountability and governance.</p> <p>Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.</p>
<p>GS/FACC 6840 03 - Experiencing Financial Accountability</p>	<p>Course deleted</p> <p>Rationale: The course was poorly conceived and at least 5</p>

	years premature. The MFAC needs to develop a strong alumni network to make such a course viable
GS/FACC 6846 03 - Internship in Financial Accountability	Course deleted Rationale: This is a non-credit course conceived as a post-graduate internship offered to provide relevant experience before facing the job market. The course was poorly conceived and at least 5 years premature. The MFAC needs to develop a strong alumni network to make such a course viable
GS/FACC 6800 03 - Directed Readings	Change in course number only to signify that this is not a required course GS/FACC 6990 03 - Directed Readings Course number is changed for consistency. All required courses will end in 00 and all elective courses will end in 60, 70, 80 or 90.

**TABLE 2
NEW COURSES**

Name	Description
GS/FACC 6180 03 - Sustainability and Corporate Social Responsibility	This course integrates concepts of sustainable development and corporate social responsibility and examines corporate strategies from three perspectives: social, environmental and economic outcomes; the interests and rights of future and current generations; value that nurtures positive relationships among firms, labor and communities.
GS/FACC 6190 03 - Cases Studies in Stakeholder Accountability for Sustainability	This course examines applied issues of ecological, ethical and economic integration through a stakeholder accountability lens. Case studies and current events are used to explore issues such as fossil fuel development and climate change, globalization and labour standards, and financial instability and inequality. The focus is on managing diverse and competing stakeholder interests that arise in the context of sustainability.
GS/FACC 6280 03 - Directors' Duties in Discharging the Board's Accountability Responsibilities	The Board of Directors is the primary vehicle for achieving accountability and proper governance in any organization. This course provides guidance to play an effective role as a Board member
GS/FACC 6290 03 - Legal and Regulatory Compliance to Promote Accountability and Good Governance	Good governance requires that organizations be in compliance with all facets of legal and regulatory requirements. This course reviews the requirements that Board Directors should be familiar with.
GS/FACC 6380 03 - Performance Reporting to Enhance Accountability in the Public Sector	This course looks at performance reporting in the public sector employing comprehensive auditing in the context of the theory and practice of accountability. Containing elements of political science, history, audit and accounting, the course offers an integrated picture of the development of accountability concepts, theory and principles, their connection to governance and management, and the role, evolution, theory and current practice of performance reporting and auditing. It focuses on three different areas: first, on the fundamental notion of accountability in the public sector; second, on reporting principles to guide performance reporting to governing bodies; and third, on the theory and practice of the three different

	models of comprehensive auditing as key assurance mechanisms.
GS/FACC 6390 03 - Ethics Issues Impeding Accountability in the Public Sector	The course builds on the required ethics course GS/FACC 6100 03 “Corporate Responsibility & Ethics in the program. Comparisons are drawn with the private sector. The course examines the role of ethics in promoting accountability, good governance practices, sustainable government and value for money for taxpayers. Analyses of recent ethics scandals are made with a view to how to prevent re-occurrence and how to change the culture of the public civil service.

**TABLE 3
PROPOSED LIST OF NEW COURSE NUMBERS AND TITLES**

<i>Course Number</i>	<i>Long Title</i>	<i>Short title (40 character limit)</i>
Required:		
GS/FACC 6000 03	Introduction to Accountability & Governance	Introduction: Accountability/Governance
GS/FACC 6100 03	Corporate Responsibility & Ethics	Corporate Responsibility & Ethics
GS/FACC 6200 03	Performance Measurement Systems	Performance Measurement Systems
GS/FACC 6300 03	Enterprise Risk Management	Enterprise Risk Management
GS/FACC 6400 03	Research Methods & Statistical Inference	Research Methods & Statistical Inference
GS/FACC 6500 03	Corporate Governance	Corporate Governance
GS/FACC 6600 03	Accountability Issues in the Public Sector	Public Sector Accountability
GS/FACC 6700 03	Executive Compensation	Executive Compensation
GS/FACC 6800 03	Synthesis of Theory and Practice in Accountability and Governance	Synthesis: Accountability & Governance
Elective:		
GS/FACC 6180 03	Sustainability and Corporate Social Responsibility	Sustainability & Social Responsibility
GS/FACC 6190 03	Cases Studies in Stakeholder Accountability for Sustainability	Case Studies in Sustainability
GS/FACC 6280 03	Directors’ Duties in Discharging the Board’s Accountability Responsibilities	Boardroom Accountability
GS/FACC 6290 03	Legal and Regulatory Compliance to Promote Accountability and Good Governance	Regulatory Compliance for Accountability
GS/FACC 6380 03	Performance Reporting to Enhance Accountability in the Public Sector	Performance Reporting for Accountability
GS/FACC 6390 03	Ethics Issues Impeding Accountability in the Public Sector	Public Sector Ethics & Accountability
GS/FACC 6870 03	Advanced Techniques of Financial Analysis	Advanced Financial Analysis
GS/FACC 6880 03	Information Technology Governance	Information Technology Governance
GS/FACC 6890 03	Earnings Management- Forensic Accounting	Earnings Management- Forensic Accounting
GS/FACC 6990 03	Directed Readings	Directed Readings

3 b) Rationale:

The changes proposed in this Document are the result of a comprehensive review of the entire degree program conducted over the past two years. The MFAc was launched in 2008 in response to the global financial crisis. No other comparable degree existed and consequently there were no design benchmarks to rely on. In 2014 we have a much clearer vision of both the theoretical constructs and professional skills needed to address this crisis in accountability and this change proposal reflects the state of the art in 2014.. The MFAc is a deregulated graduate management degree. To be perceived as a relevant and useful degree it must be responsive to changes in the business environment. This proposal ensures these criteria are met.

The main findings of the review were:

1. The concept of financial accountability that is the core of the MFAc is a goal and not a process. It is a desired outcome of a process called effective corporate governance. An applied professional degree must focus on both process and goals and thus it is appropriate that the curriculum give explicit recognition to this duality. The MFAc must teach those normative governance practices that lead to enhanced accountability. All of the courses have been revised to reflect this. It is as much a degree in good governance practices as it is a degree in accountability.
2. The MFAc it was originally viewed as an accounting degree. This was not surprising as the MFAc proposal came from the Accounting Area of the School of Administrative Studies. However, hindsight has shown that the problems of poor governance and poor accountability are far more pervasive than the borders of the accounting department. The global financial crisis of 2008 also showed that poor governance practices across management functions swamp any specific deficiencies in the accounting domain. In particular most accountability and governance shortcomings are concentrated at the Boardroom level. The MFAc is now viewed as a management degree and we have now both management and accounting faculty teaching in the Program.
3. Current research shows that firms that are viewed as accountable and well governed also possess a culture steeped in ethical and sustainable practices. These themes have been added to the MFAc and are embedded in all courses.
4. The original target audience for the degree was mis-specified. We thought it would be senior executives, but just as with an executive MBA, you have to have a strong external reputation before senior management will enroll in a management degree. We are still developing that reputation. Our real target audience is thus junior managers who will use their MFAc knowledge to accelerate their progress to positions of senior management. Perhaps some years down the road an executive version of the degree will be offered.



4. An overview of the consultation undertaken with relevant academic units and an assessment of the impact of the modifications on other programs/graduate diplomas.

The proposed changes will have no adverse impact on any other academic unit or any other academic program at York. The MFAc is unique as a degree. It neither conflicts nor overlaps with other graduate business degrees offered within LAPS (The MHRM or MEM) or the graduate business degrees offered by Schulich (the MBA and the Masters of Accounting). Formal consultation with Schulich Business School has taken place.

5. A summary of any resource implications and how they are being addressed.

Resource implications from the proposed changes are in fact highly favorable for York since the MFAc is a deregulated degree not dependent on government subsidies. These proposed changes will greatly enhance the attractiveness of this degree and lead to significant enrolment growth with positive financial impact for the Program, the Faculty and the University.

A letter of support from Dean Singer of LAPS supports the changes in this proposal.

6. A summary of how students currently enrolled in the program/graduate diploma will be accommodated.

Proposed wording in the MFAc website during the transition period is:

Transitional Provisions

Policies and curriculum identified in this website are effective September, 2015. Students currently in the Program will not have their graduation delayed as a result of the new Program changes. During the transition period the degree can still be completed in four semesters. All transitional students should contact the Director with a proposed study plan for approval. Transitional students can choose to follow either the 30 credit or 33 credit program requirement.

APPENDIX 1 Program structure, Learning Outcomes and Assessment

Program Learning Outcomes (Table 1)

	The MFAc degree will be awarded to students who:
Depth and breadth of knowledge	<ul style="list-style-type: none"> • Have demonstrated high levels of understanding of the: <ul style="list-style-type: none"> ○ Theoretical frameworks for accountability and governance in the private and public sectors ○ Historical context of evolution of accountability and governance ○ Pragmatic issues in improving accountability and governance ○ Regulatory and legal constraints ○ Ethical issues involved ○ Impact of governance and accountability strategies on a sustainable environment ○ Models of performance measurement In organizations ○ Impact of managerial compensation models on managerial behavior (the agency problem) • Have demonstrated an ability to recognize accountability and governance issues, prescribe remedies and oversee implementation strategies • Have demonstrated sufficient competency in managerial and communications skills to be able to be effective advocates for change
Research and scholarship	<ul style="list-style-type: none"> • Can demonstrate a basic understanding of: <ul style="list-style-type: none"> ○ Scientific reasoning ○ Statistical inference ○ Probabilistic reasoning ○ Research methodology ○ Evidence evaluation • Can construct an experimental design to rigorously evaluate a business issue • Can distinguish between good research and weak research
Level of application and knowledge	<ul style="list-style-type: none"> • Make sound decisions in complex situations by applying a mix of evidence, reason and expert judgment while considering multiple perspectives
Professional capacity/autonomy	<ul style="list-style-type: none"> • Show an ability to respond effectively to the ethical dilemmas that arise in organizational settings and to act with the public interest in mind
Level of communication skills	<ul style="list-style-type: none"> • Are able to write concise, well structured and well researched reports • Demonstrate the ability to present and communicate their ideas clearly and effectively • Can make effective and professional presentations • Can speak, listen and write cogently and with purpose
Awareness of limits of knowledge	<ul style="list-style-type: none"> • Recognize self limitations and when outside expertise is called for • Recognize the inherent conflicts between self interest and public interest

Achievement of Outcomes

The learning objectives of Table 1 are achieved in the following ways:

1. Depth and breadth of Knowledge: Students take 33 credit hours building on strengths required at admission. Some courses focus on certain objectives more than others. Assume that level 3 represents intensive depth of coverage, 2 represents some depth of coverage, 1 represents superficial depth and 0 represents no

coverage. Table 2 shows how the 9 core courses contribute to the depth/breadth knowledge requirements. Electives are by definition level 3 in their specialized scenarios.

Table 2: Knowledge Objectives by Course (old course numbers)

	6000	6120	6140	6180	6220	6460	6620	6900
Theoretical frameworks for A/G in private/public sector	3	1	0	0	1	1	1	2
Historical context	3	2	1	0	1	1	1	1
Pragmatic issues	1	1	3	1	3	3	3	3
Regulatory and legal constraints	1	0	1	0	3	3	2	2
Ethical issues	2	3	1	0	1	1	1	2
Sustainability issues (mainly addressed in electives)	2	1	0	0	0	0	0	3
Performance measurement models	0	0	3	0	1	1	1	2
Management compensation models	1	0	1	0	1	1	3	2
Recognize/prescribe/oversee A&G issues and solutions	2	1	1	1	2	2	2	3
Communication skills	3	2	2	2	2	2	2	3
Research	2	1	1	3	1	1	1	1

2. Research and scholarship: There is no thesis option in this degree but there is a Major Paper Option (6 credits). There is also a Directed Readings Course. There is one required core course GS/FACC 6180 which provides sufficient tools to conduct a formal research project. However, its more important role as part of an applied degree is to teach students how to critically evaluate published research. Students evaluate papers from both academic and professional journals. Students get considerable practice doing library research through term paper requirements courses have a term paper requirement requiring library research.
3. Level of application of knowledge: Courses are conducted as seminars and include complex real world cases. Translation of theory and abstract knowledge to practical scenarios is stressed.
4. Professional capacity/autonomy: Students study ethics and societal issues and are required to simulate the complexity of managerial decision-making balancing profit and public interest objectives through extensive analysis of cases.
5. Communication skills: The first course introduces the theoretical frameworks (principles of effective writing, thinking, speaking and listening). Through seminar format requiring active participation, students hone these skills throughout the program. An extreme emphasis is placed on effective communication in the MFAc.
6. Awareness of limits of knowledge: The MFAc addresses the persuasiveness and sufficiency of evidence and the limits of decision models in the face of insufficient information. A central theme in good governance is hiring appropriate expertise for a task. This is part of proper delegation. Real world issues usually present alternatives, but rarely simplistic solutions, and this complexity is simulated through extensive case analysis.

Mode of Delivery, Methods and Criteria for Assessing Student Achievement

The MFAc courses are all conducted as small enrolment seminars employing a Socratic model of learning. Students are challenged in their thinking continuously and required to defend their logic. Every course has a substantive mark for participation and care is taken to distinguish quality from quantity. Students have to critique published research and translate findings into practical applications. There is extensive use of real world cases in the Program to simulate complexity the environment. There are writing assignments on a weekly basis and often a term paper requirement. By the end of the Program, there is ample opportunity to create and assess student

skills with respect not only to knowledge acquisition, but also to critical thinking, expert judgment and communication skills involving all aspects of accountability and governance.

York University Faculty of Health

Proposal for an Undergraduate Minor in Global Health

1. Introduction

1.1 Statement of Proposal

Provide a brief statement of the undergraduate program being proposed, including category, and indicate the parent program and/or unit in which the undergraduate minor will be administratively housed.

The proposed “Minor in Global Health” will be housed within the Global Health Program in the Faculty of Health. Launched in September 2014, the Global Health Program includes a Bachelor of Arts (BA) and a Bachelor of Science (BSc) option; both are specialized Honours degree programs. A new interdisciplinary program that draws on curriculum from across the four units in the Faculty of Health (Health Policy & Management, Kinesiology & Health Science, Nursing, and Psychology), the Global Health Program is governed by a cross-Faculty Steering Committee and administered under the auspices of the Dean’s Office. The program allows students to explore various disciplines, issues, and practices associated with global health and the increasingly globalized world. This proposal addresses the addition of a minor in Global Health, which would commence in September 2015.

The minor in Global Health will be available to students who are not pursuing an undergraduate degree in Global Health. It is anticipated that the minor option will be available to students across faculties including Health, Liberal Arts & Professional Studies, Science, and Environmental Studies. The Faculty of Environmental Studies is already involved in the Global Health degree program as it will be offering a concentration in Global Health and the Environment

1.2 Appropriateness and Consistency of Proposed Program

Comment on the appropriateness and consistency of the undergraduate program name with current usage in the discipline or area of study, as appropriate

As an area of study, Global Health focuses on improving health for people worldwide and creating the conditions that allows health equity to be achieved. The definitions and concepts used to articulate Global Health are broadly accepted by scholars internationally. According to Koplan et al.¹, *global health* addresses “issues that directly or indirectly affect health but that can transcend national boundaries ... , embraces both prevention in populations and clinical care of individuals.., [and] is highly interdisciplinary and multidisciplinary within and beyond health sciences” (p. 1992). Global health thus concerns itself with reducing health disparities and protecting against global health threats that ignore national borders.² In this field, the disciplines of public health and epidemiology intersect with the social sciences including demography, political economy, law and human rights, and sociology to address problems that can arise locally but have global implications. The field of Global Health considers the underlying global political or economic factors that have significant consequences for health and health equity. Health is a barometer of poverty and inequity in the world, and thus, it concerns questions of justice, equality and human rights. Moreover, as the transmission of health risks

¹ Koplan, J. P., Bond, T. C., Merson, M. H., Reddy, K. S., Rodriguez, M. H., Sewankambo, N. K., & Wasserheit, J. N. (2009). Towards a common definition of global health. *The Lancet*, 373(9679), 1993-1995. doi:10.1016/S0140-6736(09)60332-9

² Macfarlane, S.B., Jacobs, M., Kaaya, E. E. (2008). In the name of global health: Trends in academic institutions. *Journal of Public Health Policy*, 29(4), 383-401.

and threats is globalized, underlying inequalities are exacerbated, as the impact of HIV/AIDs in developing nations demonstrates.

Through such interdisciplinary approaches, Global Health addresses the determinants and distribution of health in international contexts. “Underpinning the United Nations’ Millennium Development Goals (MDGs) and multiple World Bank strategies for growth and development is the need to secure the health – whether mental or physical – of populations. The increased movement of goods, people, and diseases across borders and changes to the climate and environment makes individual health a global concern...”³ The degree of inequality across societies, in terms of access to food, shelter and sanitation, a social safety net, insurance for personal health services, and organizational capacity to respond to threats to public health varies across states and societies. Globally, the pattern of inequality tends to reflect a North-South divide. A sense of social responsibility to address such inequalities on the part of the global community has led to the emergence of a broad and complex system of global health governance.⁴ However, this series of organizations bypasses the World Health Organization (WHO) and allows private interests much more influence and also, they do not operate in a democratic fashion. Since the level at which responsibility for the provision of health services lies can differ across societies: from the state, the individual, to the market, and can engage supranational organizations such as the WHO, the multi-level governance of global health makes it a complex area in need of further study.

The field of Global Health therefore includes an exploration of contemporary issues, such as the gross disparity in the distribution of wealth and income between and within countries through a health equity lens. The insights gained through this field can help in developing new policy alternatives, which can further the analysis of neo-liberal globalization and the related crises of development and democracy that are part of an emerging trend in the North-South political discourse. Health policies designed from an equity perspective and a gender based analysis will assist the WHO and other international health agencies in reaching health goals in resource poor countries. Such policies, when applied and practiced, will advance human rights and social justice.

Also foundational to the field of Global Health are the disciplines of public health and epidemiology, embracing disease prevention and health promotion in populations as well as clinical care and health promotion with individuals. HIV/AIDS, SARS, and the recent Ebola epidemic are stark examples of lethal communicable diseases that transcend national boundaries. Moreover, environmental issues including global climate change directly or indirectly affect health at the local and global level⁵.

Recent reports and recommendations indicate the emergence of Global Health as a field of study. These include the *Report of the World Health Organization Commission on Social Determinants of Health* (2008), the *OECD Paris Declaration on Aid Effectiveness* (2005), and the subsequent *Accra Agenda for Action* (2008). Likewise, recommendations contained in such reports as the *Ontario SARS Expert Panel Report* (2003), the *Ontario SARS Commission Second Interim Report* (2004), and the subsequent Ontario Ministry of Health and Long Term Care report, *From Vision to Action: A Plan for the Ontario Agency for Health Protection and Promotion* (2006), the recommendations of the *United Nations High Level Meeting on Non-Communicable Disease Prevention and Control* (2011), and the UNAIDS (2012) *Global AIDS Response Progress Reporting* also underscore the significance of Global Health. Similarly, the *Blair Commission for Africa Report* (2005) and the more updated *Still our Common Interest: the Commission for Africa Report* (2010) point out the nature and dynamics of an interdependent world that calls for a global approach to human health and development issues. The Canadian Academy of Health Sciences’ (2011) report, *Canadians Making a Difference*, suggests that

³ Harman, S. (2012). *Global Health Governance*. London and New York: Routledge, p. 1.

⁴ Sen, A. 2002. "Why health equity?" *Health Econ.* 11: 659–666.

⁵ Kirk, M. (2002). The impact of globalization and environmental change on health: Challenges for nurse education. *Nurse Education Today*, 22(1), 60-71.

Canada can play a part in five strategic areas: Indigenous and circumpolar health research, population and public health, community oriented primary health care, global health innovation, and smart partnerships in education and research.

2. General Objectives of the Undergraduate Minor

2.1 Brief Description

Provide a brief description of the general objectives of the undergraduate program.

The undergraduate minor in Global Health aims to provide students the opportunity to develop the knowledge and skills to understand, analyze and approach global health issues from an interdisciplinary perspective. Students will explore the local-global interconnectedness and the underlying biophysical, social, economic, and political factors that influence human health and wellbeing. Students will also gain an understanding of global health governance and health systems around the world. In addition, through analyzing the development of global health policy, students will strengthen their understanding of global health determinants in an increasingly interconnected global world. In addition, completion of the minor will prepare students to apply for graduate programs in global health, as well as other relevant graduate programs

The proposed minor will be offered to those students who are not enrolled in the Global Health BA and BSc programs and whose home program permits the addition of a minor. The minor is aimed to complement students' Honours Degree program, allowing them to expand their interests and/or future goals from a Global Health perspective. It will prepare graduates with a global perspective on issues of human health and health equity in an increasingly pluralistic and interdependent world.

2.2 Relationship of the proposal to Unit, Faculty and University Academic Plans

Describe how the general objectives of the undergraduate program align with University and Faculty missions and academic plans.

York University and the Faculty of Health are known for their emphasis on social justice and equity. As well, the Faculty of Health is currently involved in the preparation of health care professionals through its Nursing program and kinesiology majors focused on health promotion and disease management. The Faculty of Health's BA and BSc program in Global Health is in keeping with these values and builds on the curriculum of its core disciplines (Health Policy and Management, Kinesiology and Health Science, Nursing, and Psychology). It is the first undergraduate program of its kind in Canada. The proposed minor in Global Health will prepare graduates with many of the core competencies that are integral to the parent program.

The proposed minor in Global Health is in keeping with the University's commitment to interdisciplinarity and aligns with the vision described in its University's Academic Plans (UAP)⁶ and the Faculty of Health's inaugural Strategic Plan.⁷ First and foremost, health is a priority area in which the University plans to continue expanding teaching and research activities over the next decade. The Faculty of Health's Strategic Plan (2007-2012) articulated its vision of becoming "a global leader in

⁶ Senate of York University (2005, 2010). *University Academic Plan 2005-2010*; and, *University Academic Plan 2010-2015: Enhancing Academic Quality in a Global World*. Toronto, ON: Author.

⁷ Faculty of Health. (2007). *Faculty of health strategic plan 2007-2012*. Toronto: Faculty of Health, York University. Available: <http://www.yorku.ca/health/>

redefining and advancing health and human science.” This means ‘keeping more people healthier longer’ through broadly addressing health and its social determinants and creating an integrated health system that goes beyond medical care.

The proposed minor in Global Health aims to develop future leaders to synthesize knowledge and develop solutions to health issues around the globe. It will provide the leaders of tomorrow with the skills and knowledge to contribute to the increasingly globalized world. In Fall 2009, the Green paper on Internationalization discussed “preparation of our students to live and work in the Global community” as an objective. York University is situated in one of the most diverse cities in the world, and in the heart of the rapidly developing York Region, where immigration accounted for 60% of the population growth between 2001 and 2006.⁸ Thus, the local community reflects the global community. This minor will help students gain knowledge of local-global connections in relation to global health, and this will help to position graduates for success in professional studies (e.g., medicine, nursing) and graduate studies, as well as in a range of career options in emerging field of global health. The minor also aligns with York University’s Academic Plan 2010-2015 to enhance academic quality in a globalized world.

3. Need and Demand

3.1 Similar Programs offered by York University

Identify similar programs offered at York..., with special attention paid to any innovative and distinguishing aspects of the proposed program.

York’s Undergraduate Honours BA and BSc Program in Global Health launched in Fall 2014. There are no other minor programs that focus on global health. However, several other health-related minor programs are offered, as follows:

- Minor in Health and Society looks critically at biomedical models and practices, to understand the complexity of health policy, to see way in which globalizing economies shape both illness and health care, and to appreciate the role played by social forces and cultural change in shaping individual well-being. Offered by Department of Social Science, Faculty of Liberal & Professional Studies.
- Minor in Medical Anthropology provides students majoring in health related disciplines with critical perspectives on western biomedical knowledge and practices and knowledge of diverse health challenges and healing systems around the world. The cross-cultural perspective offered will provide students in health related fields with complementary social science understandings of health and illness. Offered by Department of Anthropology, Faculty of Liberal & Professional Studies.
- Minor programs in Health Policy, Health Management and Health Informatics: These minors explore the three major areas of health administration: Health Policy draws on public administration theory, history, political economy, sociology, and economics. Health management incorporates organizational behavioural theory; examines concepts of health services, health policy, accounting, and finance and health evaluation. Health Informatics fosters the use of

⁸ York Region Community Services and Housing Committee. (February 2008). *Community social data strategy update: Census 2006 releases*. Available: http://www.york.ca/Departments/Community+Services+and+Housing/statistics_publications.htm

information technology to support quality of records and ensure the accessibility of health care across diverse geographies. Offered by School of Health Policy & Management, Faculty of Health.

Distinct features of the proposed minor program in Global Health are its interdisciplinary approach to political and social determinants of health, issues of chronic and communicable diseases and public health, and an integrated local-global focus. In contrast, the minors offered by the School of Health Policy and Management emphasize a Canadian focus. The Global Health minor will be a unique addition as it will focus on health in a more globalized context.

3.2 Description of General Need and Demand

Provide brief description of the need and demand for the proposed undergraduate certificate, focusing as appropriate on student interest, social need, potential employment opportunities for graduates, and/or needs expressed by professional associations, government agencies or policy bodies.

An early indication of the need and demand for the proposed new minor was expressed in a letter of support from the Dean of Environmental Studies included in the new program proposal for the Global Health program (2013). The Dean's support for contributing a concentration in Global Health and Environment to this new program clearly indicated that a minor in Global Health would be of interest to environmental studies students.

Student Interest

Students both from within York and external to York have expressed interest in transferring into the Global Health Program and/or pursuing a minor in the program since the launch of the new Global Health BA and BSc.

A short survey regarding the interest in a Minor in Global Health was sent out to students in the School of Health Policy and Management as well as the departments of Kinesiology and Health Sciences, Psychology, and several other LA&PS departments. There were 68 responses to this survey, the majority of them from the Kinesiology and Health Studies programs. Fifty students (74%) indicated an interest in pursuing a minor in Global Health. Of those 44 students whose current program allows them to take a minor, 32 students (73%) indicated an interest in pursuing a minor in Global Health.

Several examples of comments made by students interested in pursuing a minor in Global Health are captured here:

- I think it would be a great supplement to my current program
- Since I am planning on pursuing a career in medicine, I am interested in the topic of global health because I believe that it will help give me a better understanding of healthcare in general so I can be a more effective healthcare professional.
- Global health expands our knowledge on health by broadly looking at the social determinants of our health. As a kinesiology major, it would be interesting to take courses that broaden our knowledge on health rather than just learning about how it is viewed within the realm of sport and physical activity.
- Knowledge/even basic understanding of global health would better prepare me for traveling abroad and understanding different healthcare systems/medical situations common outside of Canada.
- As a health policy major it is important to understand both the Canadian political agenda with respect to health, as well as the global regimes. Understanding global health and incorporating these international policies in Canada will improve the health of Canadians.
- Global health would allow me to study the effects that health policy around the world not only in Canada. I will also be more prepared for doing a master's in public health as it will allow me to broaden the scope of my knowledge allowing me to have international opportunities.

Eighteen (18) of the students surveyed indicated that they were not interested in pursuing a minor in Global Health. Their comments reflected the following:

- Global health is very broad program and it is hard to imagine any undergraduate getting advantage out of it as compare to graduate studies. Our existing health studies program is already broad enough, the program did not help me without taking very specific technical courses to peruse career. The other good reason to not have global health as a minor is that mostly these sort of program help to professionals who are currently working in the health sector.
- Not a useful degree at the undergraduate level
- I am very satisfied with specializing in Kinesiology as my undergraduate degree

In addition to the students surveyed, about a dozen other students both from within York and external to York have emailed or called to express interest in transferring into the Global Health Program and/or pursuing a minor in the program since the launch of the new Global Health Program.

Social Need

Students will have the opportunity to complement their major program of study with this Global Health minor. Global Health is an emerging field with growing significance in an increasingly globalized world. The minor will be an asset to students in faculties of Health, Liberal Arts & Professional Studies, Science, and Environmental Studies. These students will gain employable skills and knowledge surrounding global health, comparative health systems, the challenges of chronic and communicable diseases and community empowerment in resource-poor settings, and health care sector reform across cultures and countries.

Potential Employment Opportunities for Graduates

Students who graduate with a minor in Global Health will have value added to the employable skills they have developed in their major program of study. In particular, they will be able to understand, analyze and approach issues of global health from an interdisciplinary perspective that encompasses public health basics, the underlying social and political factors that intersect to influence global health, and the principles of human rights needed to enhance the health and quality of life of people around the world. Graduates will be well positioned to tackle issues of human health and health equity in an increasingly pluralistic, interdependent world. A minor in Global Health may provide students with a greater number of career opportunities; for example, within the public health sector, health research agencies, and health-related government and non-government organizations and business enterprises, nationally and internationally.

3.3 Estimate of the demand for the program

Comment on the projected in-take into the undergraduate certificate, including the anticipated implementation date (i.e. year and term of initial in-take) and steady-state enrolment.

The anticipated implementation date for the minor program is fall 2015. Estimated enrollment projections have not yet been determined. It is expected that there will be an enrollment of approximately 10 students per year, and the number is expected to rise as the program progresses. Rough estimates are based on the findings from the York University Factbook. Table 1 below shows the average number of students that have taken a Faculty of Health minor and the Health and Society minor.

Table 1: Minor program enrollment within a 4 year period

Program Minor	2010 - 11	2011-12	2012-13	2013-14
Health Policy	1	4	2	3
Health Management	5	8	1	15

Health Informatics	2	4	0	4
Health Studies*			10	
Health and Society	11	14	7	4
Kinesiology and Health Science	27	23	28	13
Psychology	197	123	202	223
*Health Studies numbers not provided in University Fact Book for other years listed				

4. Curriculum, Structure and Learning Outcomes

Describe the undergraduate minor requirements and associated learning outcomes, including explicit reference to how the certificate curriculum and structure supports achievement of the learning outcomes.

4.1 Minor Requirements and Associated Learning Outcomes

Describe the undergraduate minor requirements and associated learning outcomes, including explicit reference to how the minor curriculum and structure supports achievement of the learning outcomes

Minor Requirements

Requirements for the minor program in Global Health include a minimum of 30 credits from core HH/IHST courses⁹, including:

- four required courses (15 credits) at the 2000/3000 level;
- two courses (6 credits) at the 4000 level (excluding HH/IHST 4300 and HH/IHST 4400); and
- three courses (9 credits) chosen from the remaining HH/IHST core courses (excluding HH/IHST 4300 and HH/IHST 4400).

Students are also required to take the appropriate prerequisites for these courses.

Associated Learning Outcomes

Students taking the Global Health minor program have the opportunity to study the determinants of health and the consequences and patterns of disease across societies; health promotion and the role of medical technologies and interventions in health improvements; global health ethics and human rights; and the economic, political, and social factors that shape local and global health.

Graduates who complete the minor will:

- demonstrate understanding of the requisite interdisciplinary approaches and theoretical lenses concerning global health issues;
- identify and explain basic epidemiologic and statistical methods used in the global health literature;
- define and assess the health status of populations, drawing on knowledge about the determinants of health and illness, and factors contributing to health promotion and disease prevention in resource-poor settings;

⁹ Global Health Core courses available to students in the Minor in Global Health are listed in Tables 2 & 3.

- describe how multi-level governance and the political processes inherent in global health governance involve issues of human rights and can affect population access to the determinants of health;
- recognize the importance of collaboration within the context of global health governance and leadership.

4.2 Methods and Criteria for Assessing Student Achievement

Address how the methods and criteria for assessing student achievement are appropriate and effective relative to the minor learning outcomes.

In the proposed minor program student achievement will be assessed based on the completion of required Global Health courses and upper level Global Health course electives. Student achievement will be measured through use of traditional methods of readings, critical analysis, research, and inquiry and tested through exams, assignments, and reflections. New evaluation measures that make use of information technology will also be incorporated. Some courses will employ tutorials to enhance small group learning and participation. Where possible, courses will utilize e-learning and experiential education pedagogies.

4.3 List of courses that will be offered:

Provide a list of courses that will be offered in support of the undergraduate certificate. The list of courses must indicate the unit responsible for offering the course (including cross-lists and integrations, as appropriate), the course number, the credit value, the short course description, and whether or not it is an existing or new course. For existing courses, the frequency of offering should be noted. For new courses, full course proposals are required and should be included in the proposal as an appendix. (The list of courses may be organized to reflect the manner in which the courses count towards the program/field requirements, as appropriate; e.g. required versus optional; required from a list of specified courses; specific to certain concentrations, streams or fields within the program, etc.)

Table 2: Required Courses for the Minor in Global Health (15 credits)

Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	SHPM	2000	3.00	New	Yearly
Global Health Policy: Power and Politics					
Analyzes the process through which global health policy is developed. As national and global initiatives can intertwine, the course begins by exploring and categorizing the manner in which nation governments are structured, and the factors that influence the process of policy decision-making at the national and global levels. Explores case studies that demonstrate global health policy development.					
Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	SHPM	2200	3.00	New	Yearly
Determinants of Health: Local to Global					
This course will provide an opportunity for participants to develop or strengthen their understanding of social determinants of health from a global perspective. Participants will engage in critical analysis of social inequities and the health consequences to global populations and will also develop an understanding of the concept of global citizenship.					

Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	NURS/SHPM	2010	6.00	New	Yearly
Global Research Methods and Measurement					
An introduction to methodological, statistical and computer techniques used in research and the application of these techniques to quantitative and qualitative research in the context of global health. Topics such as research design, sources of validity and bias, reading research reports and interpretation of findings and applicable analytical methods will be included for both research paradigms					
Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	IHST/KINE	2100	3.00	New	Yearly
Chronic Diseases and Care					
This course will examine the complexity and impact of chronic diseases, also known as non-communicable diseases, within national and international health care systems. It will define and investigate the current prevalence, significance, risk factors and determinants of the major current chronic conditions and their prevention and management.					

Table 3: Core Course Options for the remaining 15 credits in the Minor in Global Health
 (two courses (6 credits) at the 4000 level (excluding HH/IHST 4300 and HH/IHST 4400); and three courses (9 credits) chosen from the remaining HH/IHST core courses (excluding HH/IHST 4300 and HH/IHST 4400))

Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	IHST/NURS	1010	3.00	New	Yearly
Foundations of Global Health Studies					
An inter- and multidisciplinary introduction to the issues underlying Canadian and international health care system. Examines the social, cultural, economic and political influences on concepts, values and structures of Canadian and international health care systems.					
Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	IHST/KINE	1000	6.00	New	Yearly
Human Anatomy and Physiology for Health					
This course will examine human anatomy and physiology with a focus on health and disease in the body as a whole as well as each body system. Students will examine how the different body systems work together to maintain homeostasis and how the systems react when homeostasis is disrupted by disease.					
OR					

HH	IHST/KINE	1001	3.00	New	Yearly
Human Anatomy and Physiology for Health 1					
This course examines human anatomy and physiology with a focus on health and disease in the body as a whole as well as each body system. Students examine how the different body systems work together to maintain homeostasis and how the systems react when homeostasis is disrupted by disease.					
AND					
HH	IHST/KINE	1002	3.00	New	Yearly
Human Anatomy and Physiology for Health 2					
This course examines human anatomy and physiology with a focus on health and disease in the body as a whole as well as each body system. Students examine how the different body systems work together to maintain homeostasis and how the systems react when homeostasis is disrupted by disease.					
Faculty					
Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered	
HH	IHST/NURS	3000	3.00	New	Yearly
Epidemiological Approaches to Health Care					
This course introduces students to the principles of epidemiology and its application to communicable diseases. Additionally it provides current knowledge and theories regarding those infectious diseases of relevance to populations and programs in place to address spread of disease.					
Faculty					
Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered	
HH	NURS	3100	3.00	New	Yearly
Communicable Diseases and Care					
This course introduces students to the current knowledge and application of epidemiology to communicable diseases. Additionally it provides current knowledge and theories regarding those infectious diseases of relevance to populations and programs in place to address the spread of disease.					
Faculty					
Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered	
HH	IHST/NURS	3545	3.00	New	Yearly
Promoting Global Health					
Students examine the evidence that while progress in achieving important global health outcomes has occurred, significant challenges remain to be solved. Global health issues impacted by such factors as poverty, gender inequality, international trade policy, climate-change, loss of biodiversity, food insecurity, war and displacement are explored as expressions of structural influences which perpetuate global disparities in health. Asking the question "What would it take to achieve health for all?" students identify pressing global health issues and the global health promotion strategies being used to address them.					
Faculty					
Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered	
HH	IHST/NURS	3740	3.00	New	Yearly
Health Care Planning for Communities					
This course provides a theoretical and methodological background for health problem analysis and program/service planning at the community and regional levels.					
Faculty					
Responsible	Course	Credit Value	Existing	Frequency Offered	

	Unit	Number		or New	
HH	IHST/SHPM	4010	3.00	New	Yearly
Health Care Ethics					
Provides an overview of ethical issues involved in health care policy, management and informatics in Canada. It combines theory and practical application to allow for reflection on the role values and beliefs play in health policy, management and informatics decisions.					
Faculty					
Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	IHST/PSYC	4100	3.00	New	Yearly
Program Evaluation					
Provides an overview of the tools and techniques of program monitoring and evaluation with particular focus on health programs. Evaluation of health (or other social/development) programs is often mandated. The course focuses on how to do evaluations that are useful and actually used. In other words, to carry out utilization focused evaluation.					
Faculty					
Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	IHST/SHPM	4200	3.00	New	Yearly
Global Health Governance and Leadership					
This course introduces students to global health governance as a mechanism for resolving transnational interdependent health problems where global cooperation is needed. The course is designed to give students an understanding of issues in global health governance. The course combines theory with application to develop leadership skills needed to work with organizations that provide support for global health initiatives.					
Faculty					
Faculty	Responsible Unit	Course Number	Credit Value	Existing or New	Frequency Offered
HH	IHST/SHPM	4100	3.00	New	Yearly
Health and Human Rights					
Examines how health and human rights are complementary approaches to understanding and analyzing human well-being. The congruence of the two fields has arisen as the definition of human rights has expanded from civil and political rights to include social and economic rights. Will examine this evolution and its implications.					

5. Describe the proposed modes of delivery

Describe the proposed mode(s) of delivery, including how it/they are appropriate to and effective in supporting the certificate learning outcomes.

The Global Health program is offered year round, with use of classroom, tutorials, laboratories as needed, and extensive use of online/blended delivery. Likewise, the proposed modes of delivery for the Minor in Global Health will include the use of online and blended approaches in addition to curricular and co-curricular introduction of the requisite knowledge and skills to understand, analyze and approach issues of global health from an interdisciplinary perspective.

6. Admission Requirements

Confirm that students engaging in the undergraduate minor will have been admitted to and registered in an undergraduate program(s), or, for direct-entry undergraduate minors, describe the admission requirements. For all types, address how the admission requirements are appropriately aligned with the minor learning outcomes.

Students must be enrolled in an approved Honours (BA/BSc/BHS/BES) program that offers a major/minor option in the Faculties of Health, Liberal Arts & Professional Studies, Environmental Studies, Science, or Engineering. Student must have a minimum 5.0 (C+) GPA to be admitted into the proposed minor program. Students in the minor program in Global Health must maintain a GPA of 5.0 (C+) or above in the minor.

7. Resources

7.1 Faculty Resources

Comment on the expertise of the faculty who will actively participate in delivering the undergraduate certificate, focusing on its current status, as well as any plans in place to provide the resources necessary to implement and/or sustain the undergraduate certificate. Provide a Table of Faculty, as appropriate.

The Global Health Program is delivered by faculty appointed to one of the four units in the Faculty of Health: Health Policy & Management, Kinesiology & Health Sciences, Nursing, and Psychology. Many of the Faculty of Health faculty complement have research and knowledge expertise in areas of Global Health. It is expected that contract faculty with relevant credentials and experience will be required to cover some aspects of the program delivery needs; however, it is expected that 80% of courses will be taught by full time (FT) faculty.

The attached list of FT faculty members outlines their teaching and research foci. This faculty complement will allow for delivery of the Global Health Major and Minor programs in the near and longer term, including coverage of sabbaticals. Those who have not yet had the opportunity to actively participate will be able to contribute new elective courses as the program grows over time.

Table 4 – Listing of Faculty:

Full Time Faculty Support for Major Core Courses - Faculty of Health

Faculty Name & Rank	Home Unit	Area(s) of Specialization
Parissa Safai Associate Professor	School of Kinesiology and Health Sciences	<p>Research: Focus on the critical study of sport at the intersection of risk, health and healthcare. This includes research on the sports' "culture of risk", the development and social organization of sport and exercise medicine, as well as the social determinants of athletes' health.</p> <p>Teaching Areas: KINE: Research Methods KINE-1000 Sociocultural Aspects of Physical Activity</p>

Lauren Sergio Associate Professor	School of Kinesiology and Health Sciences	Research: aging, brain, motor activity, movement, neuroscience, psychophysics, vision. Teaching areas: KINE – motor learning, neuroscience, research methods. PSYC - Neuroscience
Chris Ardern Assistant Professor	School of Kinesiology and Health Sciences	Research: Areas include cardiac health, chronic disease, community-based research, epidemiology, obesity and physical activity. Teaching Areas: KINE 3635– Epidemiology KINE - Statistics
Hala Tamim Associate Professor	School of Kinesiology and Health Sciences	Research: Areas include; epidemiology, children, exercise, health behaviours, injury, maternal health musculoskeletal, public health, and youth. Teaching Areas: KINE 3635– Epidemiology KINE - Statistics
Mazyar Fallah Assistant Professor	School of Kinesiology and Health Sciences	Research: Behavioural Science, brain, cognitive process, neuroscience, perception, psychophysics, vision. Teaching Areas: KINE and PSYC neurosciences
Sherry Grace Associate Professor	School of Kinesiology and Health Sciences	Research: Cardiac Health, chronic disease, depression, electronic health records, evaluation, gender, Health behaviours, health psychology, health service, physical activity, policy, psychology, quality of life, rehabilitation, resilience, social determinants of health, stress and women. Teaching Areas : Behavioural Health and Psychology
Mazan Hamadeh Associate Professor	School of Kinesiology and Health Sciences	Research: Brain, chronic disease, diabetes, exercise physiology, metabolism, molecular biology, muscle, neuroscience, nutrition. Teaching Area: Nutrition
Hernan Humana Associate Lecturer	School of Kinesiology and Health Sciences	Research: Coaching and the Social cultural aspects of Physical Activity Teaching Areas: KINE – Coaching KINE 1000 – Sociocultural Aspects of Physical Activity
Jennifer Kuk Associate Professor	School of Kinesiology and Health Sciences	Research: Physical activity, obesity, epidemiology, diabetes, cardiac health, race and racism. Teaching Areas: KINE Fitness and Health; Metabolism & Obesity
Merv Mosher Senior Lecturer	School of Kinesiology and Health Sciences	Research: Health Teaching areas: KINE – motor learning, research methods and statistics
Nicolette Richardson Assistant Lecturer	School of Kinesiology and Health Sciences	Teaching : Anatomy and Physiology

Olasunkaanmi Adegoke Associate Professor	School of Kinesiology and Health Sciences	Research: Diabetes, Exercise Physiology, Metabolism, Molecular Biology, Muscle, Nutrition, Obesity. Teaching Areas: KINE 4020 Human Nutrition; Metabolism and Obesity, Nutrition, Physiology.
Lucia Gagliese Associate Professor	School of Kinesiology and Health Sciences	Teaching Areas: KINE 4710 Psychological Health of Chronic disease
Angelo Belcastro Professor	School of Kinesiology and Health Sciences	Research : Children's health and fitness through physical activity – using local to global perspective in research designs and methodologies; musculoskeletal health, with focus on chronic diseases Teaching Areas: Health and Fitness; Growth, Maturation and Physical Activity; Physiological Basis of Muscle Fatigue
Emilie Roudier Research Associate	School of Kinesiology and Health Sciences	Research: Chronic diseases, Vascular biology, Cancer biology, Obesity, Exercise physiology, Molecular and cellular determinant of health, Molecular and integrative physiology Teaching Areas: Chronic diseases, Molecular and Integrative physiology, Biological sciences related to human health and disease
Myriam Mongrain Associate Professor	Department of Psychology	Research: In cognitive, interpersonal, and social support variables associated with immature dependence and self-criticism, with the goal of developing better models predicting depressive onsets. Pursuing the study of resilience factors in combating depression and the development of positive interventions to build strength in those vulnerable to the disorder. Teaching Areas: PSYC – Clinical Psychology PSYC 1010 – Introduction to Psychology
Jennifer Steeves Associate Professor	Department of Psychology	Research: How does the brain adapt to changes in sensory input or to direct brain damage? In my lab, we use converging techniques to study the brain and behaviour including psychophysics, eye movement measurement, functional magnetic resonance imaging (fMRI) and transcranial magnetic stimulation (TMS). Teaching Areas: PSYC 1010– Introduction to Psychology PSYC- Sensation and Perception
Ronald Sheese Associate Professor	Department of Psychology	Research: Critical Psychology and teaching with technology. Teaching Areas: PSYC – Education PSYC – History of Psychology PSYC 1010 – Introduction to Psychology

Jill B. Rich Associate Professor	Department of Psychology	Research: Neuropsychology. Memory and cognition in normal aging and dementia (e.g., semantic memory, implicit memory, prospective memory) as well as the relationship between sex hormones and cognition (e.g., the effect of estrogen on cognition in postmenopausal women). Clinical work involves neuropsychological assessment, particularly with geriatric populations. Teaching Areas: PSYC 1010 – Introduction to Psychology
Joel Goldberg Associate Professor	Department of Psychology	Research: stigma and mental illness Teaching Areas: abnormal psychology
Joel Katz Professor Coordinator, Health Psychology Graduate Diploma Program	Department of Psychology	Research: Psychological, emotional, and biomedical factors involved in acute and chronic pain Teaching Areas: Current Issues in Health Psychology (PSYC 6455/KINE 6143)
Adrienne Perry Associate Professor	Department of Psychology	Research: autism, developmental disabilities, families, behavioural intervention Teaching Areas: Psychological assessment/diagnosis of children, assessment practicum, clinical supervision, autism and developmental delays
Jacqueline Choiniere Associate Professor	School of Nursing	Research: political economy of health; social determinants of health; health care reform; women's health; health policy; women and work; health care systems; sociology; international long-term care Teaching Areas: NURS 4546-Global Health & Nursing Issues; GS/NURS 5135: Promoting Global/Planetary Health ADMS/NURS 4710 Canadian Health Care System
Nancy Johnston Associate Professor	School of Nursing	Research: Community-based research, health delivery systems in developing countries, mental health, resilience, suffering. Teaching Areas: Suffering, Change and Innovation, Qualitative Research (Phenomenology and Hermeneutics) Global Health, Suffering.
Sandra M. Skerratt RN (EC), MN/NP-Adult Sessional Lecturer	School of Nursing	Research: Primary care Northern Ghana, Africa Teaching Areas: Epidemiology / Global Health Development of Self as Nurse: Advanced Professional Issues Nurses' Experience in Healthcare Environments

Judith Ann MacDonnell Associate Professor	School of Nursing	Research: Community-based research, disability, education, ethics, gender, health services, immigration, knowledge transfer, labour and employment, maternal health, mental health, nursing, policy, public health, race and racism, sexuality, social determinants of health, sociology, violence, women. Teaching Areas: NURS – determinants of health, health policy, health promotion, maternal, child and family, nursing education, public health and community nursing, qualitative and quantitative research methods, women’s health.
F. Beryl Pilkington Associate Professor	School of Nursing Global Health Program	Research: Community-based Research, Diabetes, Resilience, Social Determinants of Health, Vulnerable & Marginalized Groups Teaching Areas: Global & Transcultural Health, Qualitative Research Methods
Grace Ross-Sessional Lecturer	School of Nursing	Research: community health assessment Teaching Areas: Community as Partner; Nurses as Teachers and Learners; Ethical Ways of Knowing and Caring in Nursing; Communicating and Relating in Complex Situations; Research and
Christine Kurtz Landy, RN, PhD Assistant Professor	School of Nursing	Research: Health services and policy research focused on maternity care and women’s health, reproductive health, women’s mental health, refugee and immigrant health, interventions to improve health outcomes in mothers and children “at risk”. Teaching Areas: Evidence informed health care; Research methods; Women’s health; Health, Science and Society; Population and public health; Health education
Fay Mahdiah Dastjerdi Assistant Professor	School of Nursing	Research: Immigrants, Refugees, Women, Seniors/Older Adult, Marginalized Groups, Violence, Accessing Healthcare Services, Social Determinants of Health, Qualitative and Mixed Method, Methodological Issues in Research Teaching Areas: Transcultural Nursing, Qualitative and Quantitative Research Methods, Nursing
Lillie L. Q. Lum Associate Professor	School of Nursing & School of Health Policy & Management	Research: The principal investigator on recent and current nationally funded projects in organizational justice, globalization, health human resource management and distance education. Teaching Areas: HLST 1010 3.00 Foundations of Health Studies

Mina Singh Associate Professor	School of Nursing	Research: cancer care, mental health, nursing education Teaching Areas: program evaluation, stats, research, ethics, leadership, public health, global health
Sannie Tang Assistant Professor	School of Nursing	Research: health/healthcare inequities, impacts of neo-liberal globalization on access to health/healthcare for marginalized populations, social justice education, intersectionality and race/gender/class analysis. Teaching Areas: community health nursing, global health context of nursing, nursing education.
Leslie Beagrie Associate Professor Interim Master Stong College	School of Nursing	Research: education, evaluation, globalization, international, qualitative, methodology, maternal health, women Teaching Areas: health promotion, quality of life issues, women's health
Rachel Gorman Assistant Professor	School of Health Policy & Management	Research: Political economies of disability; Disability Arts and Culture movements; postcolonial and dialectical materialist approaches to understanding the social organization of disability; disability in the context of nationalisms, transnational imperialism, and national liberation; internationalist and anti-capitalist approaches to global healthcare provision. Teaching Areas: Social Determinants of Health, Public Policy and Disabilities, Uncovering the Body: Interdisciplinary Perspectives
Christo El Morr Undergraduate Program Director	School of Health Policy & Management	Research: Health Virtual Communities, e-Equity in Health, Performance Measurement, e-Education in Health, Patient e-Empowerment, Health knowledge Networks, e-Mental Health. Teaching Areas: Electronic Health records, Databases, Health Virtual Communities, eHealth, Information Systems Analysis and Design

7.2 Laboratory Resources

Not Applicable

7.3 Space

No additional space/ resources will be required. Class space will be used under the existing Global Health Program, dependent on projection estimations.

8 Calendar Copy for Global Health Minor

Honours Minor in Global Health

The Honours Minor program in Global Health comprises at least 30 (but no more than 42) credits in Global Health. These 30 credits must include:

HH/IHST 2010 6.00

HH/IHST 2000 3.00

HH/IHST 2100 3.00

HH/IHST 2200 3.00

At least 6.00 credits chosen from 4000 level courses (excluding IHST 4300 and IHST 4400)

Additional credits from the Global Health Core courses (excluding IHST 4300 and IHST 4400) for an overall total of at least 30 credits in Global Health.

9 Support Statements: