Change to Program/Graduate Diploma Academic Requirements Proposal Form

The following information is required for all proposals involving a minor modification to program/graduate diploma academic requirements. To facilitate the review/approval process, please use the headings below (and omit the italicized explanations below each heading).

1. Program/Graduate Diploma: Master of Business Analytics (MBAN)

2. Effective Session of Proposed Change(s): Summer 2019

3. Proposed Change(s) and Rationale

   The description of and rationale for the proposed modification(s) should provide information with respect to each of the following points:

   a) A description of the proposed modification(s) and rationale, including alignment with academic plans.

   The first component of this modification is a revision of the MBAN program’s learning outcomes in order to 1) better highlight the program’s focus on ethics and the societal implications of AI and big data, and 2) establish a limited and more clearly articulated set of outcomes in a competency-based format, specific and measurable in nature and tightly aligned to course-based assessments of student performance. The content and skills conveyed through the learning outcomes of the program have not changed, only the way in which the information is conveyed. A strong understanding of the ethical obligations related to data has always been a learning objective of the program; it simply needed to be more clearly articulated. As part of the School’s continuous improvement approach to curriculum, the program has established a revised set of outcomes that are more specific, measurable and limited in number. Data obtained through course-based assessments designed to measure student performance on these outcomes will be systematically collected and analyzed to determine whether curricular improvements are needed to ensure graduates meet the expectations and standards set by the program. The newly revised set includes two outcomes focused on key competencies, including the ability to identify the ethical and social responsibilities related to the collection, analysis, and reporting of data as well as the ability to describe, analyze, and devise solutions for ethical and social issues that arise in business analytics. The proposed revised set of learning outcomes for the program, along with a mapping of the outcomes against the courses, can be found in Appendix A.

   The second, and related, enhancement includes the addition of an ethics course (GS/PHIL 5340 Ethics and Societal Implications of Artificial Intelligence) to the curriculum, which focuses on the social and ethical issues arising from emerging artificial intelligence technology. The course has been developed by Prof. Regina Rini, Canada Research Chair in Social and Moral Cognition and Assistant Professor of Philosophy in the Department of Philosophy in the Faculty of Liberal Arts & Professional Studies. It is both through this and other core MBAN courses that students will achieve the ethics related learning outcomes described above. This course will explore both existing and future technology applications, with a focus on learning to recognize and anticipate novel ethical challenges. More information on this course can be found below and in the course proposal form in Appendix B.

   b) An outline of the changes to requirements and the associated learning outcomes/objectives, including how the proposed requirements will support the achievement of program/graduate diploma learning objectives. Additionally, please append the graduate program’s existing learning outcomes as a separate document.

   Given the growing number of social and ethical challenges stemming from the increasing utilization of big data, the MBAN program aims to more clearly emphasize its focus on social and ethical responsibility in data
analytics. The changes outlined in this proposal, the revision of the learning outcomes and addition of an ethics-focused course, also bring the program in line with the program accreditation standards set out by the Vector Institute’s 1000AIMs initiative. Vector’s 1000AIMs initiative was established to support the province of Ontario’s goal to produce 1000 graduates annually in the field of AI within five years. (The Vector Institute is an independent, not-for-profit corporation dedicated to research in the field of artificial intelligence, excelling in machine and deep learning. The Vector Institute launched in March 2017 with support from the federal and provincial government, private industry, and in partnership with universities, and it works with institutions, industry, start-ups, incubators and accelerators to advance AI research and drive its application, adoption and commercialization across Canada.)

The GS/PHIL 5340 3.00 Ethics and Societal Implications of Artificial Intelligence course has been developed by Prof. Regina Rini, Canada Research Chair in Social and Moral Cognition and Assistant Professor of Philosophy in the Department of Philosophy in the Faculty of Liberal Arts & Professional Studies. The course is open primarily to students from the Schulich School of Business and the Lassonde School of Engineering. This course is designed to provide an overview of social and ethical issues arising from emerging AI technology. The course will explore both existing and future technology applications, with a focus on learning to recognize and anticipate novel ethical challenges. By practicing ethical analysis in written and oral presentation, students will develop transferable skills applicable to technologies not yet invented. Topics, that are currently relevant or will become relevant in the near future, include algorithmic transparency and bias, big data surveillance and privacy, autonomous robotics in transport and warfare, economic and legal consequences of labour automation, use of robots as caregivers, and the effects of AI-human interaction on human ethical behavior. Topics that are relevant in the long term will include theoretical issues such as whether AI can or should ever make independent ethical decisions, whether AI might ever be entitled to moral rights of its own, and how humanity can contain the risks of ‘superintelligent’ future AI. The course will also consider whether the tech industry needs its own set of AI-related professional ethics (modeled on medical, business, and engineering ethics): what are the distinctive social responsibilities of AI companies and research institutions? What are the obligations of individual AI professionals?

The learning outcomes of the course are as follows:

- Describe and explain a number of different ethical and social issues associated with artificial intelligence and digital technology, such as the feasibility of coding ethical norms into AI programs, the possibility of creating artificial moral beings, the impact on individual privacy and autonomy of big data collection, and the prospect that AI systems will render many human occupations redundant.
- Apply basic moral concepts, such as justice, fairness, autonomy, and privacy, to the context of artificial intelligence systems and digital technology.
- Illustrate some of the ethical and social implications of AI using real and hypothetical examples, based on knowledge of AI technology and basic principles of moral reasoning and deliberation.
- Debate various positions and argue for conclusions concerning the ethical and social implications of AI, and present arguments and conclusions in classroom debate settings, oral presentations, and written work.
- Inculcate an intellectual habit of asking ‘should we?’ questions, not just ‘can we?’ questions, when evaluating professional projects.

This course will be added to the program curriculum by replacing the 3.00 credit elective requirement in term 2. The total number of required elective credits will therefore be reduced from 9.00 to 6.00, but the total number of required credits for the program will remain at 45.00. The new program structure with the replacement of the term 2 elective by the new ethics course is provided below:
c) An overview of the consultation undertaken with relevant academic units and an assessment of the impact of the modifications on other programs/graduate diplomas. Where and as appropriate, the proposal must include statements from the relevant program/graduate diplomas confirming consultation/support.

Consultations were undertaken within the faculty and with the Associate Dean Academic. In addition, the Program Director and the AD Academic consulted extensively with the Philosophy department and Lassonde on how to deliver ethics to professional program students. The creation and addition of the ethics course is an example of interdisciplinary collaboration at York. The course has been designed by the Department of Philosophy in LA&PS to be offered to students in the Schulich School of Business (in the MBAN as well as the upcoming Master of Management in Artificial Intelligence program) and the Lassonde School of Engineering. In addition the program director consulted with an expert panel at the Vector Institute.

d) A summary of any resource implications and how they are being addressed.
Attention should be paid to whether the proposed changes will be supported by a reallocation of existing resources or if new/additional resources are required. If new/additional resources are required, the proposal must include a statement from the relevant Dean(s)/Principal.

This change will be supported by a reallocation of existing resources. No new resources will be needed.

e) A summary of how students currently enrolled in the program/graduate diploma will be accommodated.
There are no implications for current students in the MBAN program as the changes will be implemented with the start of a new cohort. Should any students carry over from the current cohort, they will be accommodated as appropriate.

4. Calendar Copy

Using the following two-column format, provide a copy of the relevant program/graduate diploma requirements as they will appear in the FGS Calendar - http://gradstudies.yorku.ca/current-students/regulations/program-requirements/.

Please note: Senate requires that FULL Calendar copy be provided. Please include the entire graduate program/graduate diploma section, not just text that is being revised.

Please clearly and visibly indicate how graduate program/graduate diploma information has been changed using strikethrough (left column), bold, underlining, colours, etc. (right column).

<table>
<thead>
<tr>
<th>Existing Program/Graduate Diploma Information (change from)</th>
<th>Proposed Program/Graduate Diploma Information (change to)</th>
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<tbody>
<tr>
<td><strong>MASTER OF BUSINESS ANALYTICS</strong></td>
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<tr>
<td>The Master in Business Analytics is a professional degree program offered by the Schulich School of Business and designed to provide students with the breadth and depth of knowledge to be successful in a wide range of careers in areas such as banking, insurance, marketing, consulting, supply chain management, healthcare, and large technology firms.</td>
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</tr>
<tr>
<td>The Business Analytics program may serve as a foundation to pursue a PhD in this field.</td>
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<tr>
<td>Students gain a conceptual understanding and methodological competence of established techniques in business analytics that are used to create and interpret knowledge in various business environments. They are able to address complex issues using quantitative methodologies and create value for organizations using business analytics as a key measurement of performance and organizational planning. Graduates of this program understand how to apply business analytics to generate solutions that balance time, resources and complexity. They possess a skill set that is both quantitative and qualitative, with the technical competence to analyze data coupled with the skills required to communicate insights effectively.</td>
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</tr>
<tr>
<td>This twelve month full-time program commences in September each year and completes with a work study (placement) in term three.</td>
<td>This twelve month full-time program commences in May each year and culminates in a two-term experiential capstone course in which students complete a hands-on, problem-driven analytics project and develop applicable business solutions. Students interface directly with industry leaders and develop both technical and organizational expertise. All Schulich MBAN students are awarded the much-</td>
</tr>
</tbody>
</table>

Please visit http://schulich.yorku.ca for more information.

ADMISSION REQUIREMENTS
Applicants should possess a four-year undergraduate degree from a recognized university with a minimum B+ average in the last two full years (or equivalent) of academic work. Candidates are also required to have strong quantitative background demonstrated by course work in statistics, math, economics and research methods during undergraduate studies.

Post degree work experience is recommended but not mandatory.

Applicants are required to take Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) and obtain acceptable scores on all measures thereof.

Proof of English language proficiency if prior studies were not completed in English: Test of English as a Foreign Language (iBT): 100 with minimum component scores of 23 or International English Language Testing System: 7.0 overall with minimum component scores of 6.5. Strong applicants whose first language is not English and do not meet the above language requirements may be considered for admission with the condition of completion of the MBA/Specialized Master’s Preparation Program offered by the York University English Language Institute.

Completion of the online application including submission of essays, an up-to-date resume and two references.

**DEGREE REQUIREMENTS**

Students must successfully complete:
- 45 credits of course work, consisting of:
  - 30 credits of core courses,
  - 6 credits of experiential learning courses (Analytics Consulting Project), and
  - 9 credits of elective courses.

All other requirements as identical to those of Schulich’s other Master’s programs.

**coveted SAS™ (Statistical Analysis Software) certification upon completion of the program.**

Please visit http://schulich.yorku.ca for more information.

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Applicants should possess a four-year undergraduate degree from a recognized university with a minimum B+ average in the last two full years (or equivalent) of academic work. Candidates are also required to have strong quantitative background demonstrated by course work in statistics, math, economics and research methods during undergraduate studies.

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**DEGREE REQUIREMENTS**

Students must successfully complete:
- 45 credits of course work, consisting of:
  - 33 credits of core courses,
  - 6 credits of an experiential learning course (Analytics Consulting Project), and
  - 6 credits of elective courses.

All other requirements as identical to those of Schulich’s other Master’s programs.
Table 2: Relationship between Expected Learning Outcomes and Program Structure

<table>
<thead>
<tr>
<th>Expected Learning Outcomes</th>
<th>How are the Learning Objectives achieved?</th>
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</thead>
<tbody>
<tr>
<td><strong>1. Breadth and Depth of Knowledge</strong></td>
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<tr>
<td>Be knowledgeable in a wide range of business analytics topics, and be able to converse intelligently with a variety of professionals in different job functions.</td>
<td>These objectives are achieved through twelve 3.00 credit courses, all in business analytics or in a related function (e.g., statistics, operations research, marketing research, etc.). As well, the MBAN 6090 enables students to either study a topic in business analytics in detail or work on a specific analytics project within an organization.</td>
</tr>
<tr>
<td>Be able to conduct competent business analytics projects in a variety of job functions.</td>
<td>In addition to these courses, the electives offer students a chance to explore specific functional areas in business and deepen their knowledge within these areas.</td>
</tr>
<tr>
<td><strong>2. Research and scholarship</strong></td>
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<tr>
<td>Be able to conduct research using readily available transactional level data that resides in various organizations, at a level expected in a business analyst role (or higher) in the private sector. Be able to generate well-structured and formatted research reports. Have an appreciation of theoretical and empirical academic research in business analytics. Be familiar with the top scholarly outlets in the field.</td>
<td>All courses have at least one group research project, and some assignments require individual student research. Originality and creativity are emphasized. The MBAN 6090 involves conducting in depth research using organizational data. Students are expected to draw upon empirical academic research to support their conclusions and recommendations.</td>
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</tbody>
</table>
### 3. Level of application of knowledge

<table>
<thead>
<tr>
<th>Course</th>
<th>Level of Application</th>
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</thead>
<tbody>
<tr>
<td>Students are given opportunities through course-based research projects to explore different situations and are well equipped with the tools they need to apply their knowledge to new frontiers.</td>
<td></td>
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<tr>
<td>Besides coverage in the core courses, the 9.00 credit hours of electives will enable students to apply business analytics to a specific functional area and the MBAN 6090 will provide an industry specific context in which to work.</td>
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</table>

### 4. Professional capacity/autonomy

<table>
<thead>
<tr>
<th>Course</th>
<th>Professional Capacity/autonomy</th>
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<tbody>
<tr>
<td>Students will be exposed to various scenarios in which experts need to make informed decisions and exercise good judgment on specific business analytics projects. This decision making involves consideration of technical questions, such as the appropriateness of data and methods, as well as intra- and inter-organizational political processes.</td>
<td></td>
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<tr>
<td>5. Level of communication skills</td>
<td>MBAN 5140 VISUAL ANALYTICS &amp; MODELLING</td>
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<tr>
<td>Graduates are expected to be able to write concise, well researched, professionally formatted and structured reports.</td>
<td>Students have group presentations in the majority of their courses in the program. Presentation style and skills are honed. In addition, MBAN 6300 course focuses on Case Analysis and Presentation Skills. In all of the courses, class participation is encouraged and is a graded component of many courses.</td>
</tr>
<tr>
<td>Graduates are expected to be able to present, communicate, and market ideas clearly and effectively.</td>
<td>The consolidation of these learning outcomes occurs in the MBAN 6090. Students are required to produce an articulate and well-formatted presentation that summarizes the research they have completed at an organization or on a business analytics research study.</td>
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<tr>
<td>Graduates are expected to be able to put together effective and professional presentations.</td>
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<tr>
<td>6. Awareness of limits of knowledge</td>
<td>MBAN 5250, MBAN 6400, MBAN 6110 &amp; 6120 courses as well as the MBAN 6090 will provide case specific contexts in which theoretical models will be tested.</td>
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<tr>
<td>Be cognizant of the limitations of theoretical models and empirical findings.</td>
<td>These objectives are achieved through the presentation and discussion of alternative schools of thought in statistical applications.</td>
</tr>
<tr>
<td>Be aware of different schools of thought in statistical applications.</td>
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Schulich School of Business
Master of Business Analytics (MBAN)
Program-Level Learning Outcomes

Graduates of the MBAN program are able to:

**Goal 1: Analytical Skills & Enhanced Decision-Making**

1.1 Apply big data analysis tools and techniques to enhance business decision-making.

1.2 Design data-science solutions for problems commonly found in business.

1.3 Manage a business analytics project through all phases of the data science lifecycle.

1.4 Apply mathematical, statistical, and machine learning foundations of AI in the context of an evidence-based business decision support process.

1.5 Apply strategic thinking skills for managerial decision making.

1.6 Recognize the limitations of theoretical models, techniques and empirical findings.

**Goal 2: Professional Communication**

2.1 Prepare and deliver an effective and engaging oral presentation for both technical and non-technical audiences.

2.2 Prepare an effective and engaging written report for both technical and non-technical audiences.

2.3 Apply strategies to work effectively in interdisciplinary teams.

**Goal 3: Ethics & Social Responsibility**

3.1 Identify the ethical and social responsibilities related to the collection, analysis, and reporting of data.

3.2 Describe, analyze, and devise solutions for ethical and social issues that arise in business analytics.
Graduates of the MBAN program are able to:

<table>
<thead>
<tr>
<th>Program Level Learning Outcomes</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 2-3</th>
<th>Term 3</th>
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</thead>
<tbody>
<tr>
<td>1. Analytical Skills &amp; Enhanced Decision-Making</td>
<td></td>
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<tr>
<td>1.1 Apply big data analysis tools and techniques to enhance business decision-making.</td>
<td>I</td>
<td>D</td>
<td>R</td>
<td>D</td>
</tr>
<tr>
<td>1.2 Design data-science solutions for problems commonly found in business.</td>
<td>I</td>
<td>I</td>
<td>D</td>
<td>A</td>
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<tr>
<td>1.3 Manage a business analytics project through all phases of the data science lifecycle.</td>
<td>I</td>
<td>I</td>
<td>R</td>
<td>A</td>
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<tr>
<td>1.4 Apply mathematical, statistical, and machine learning foundations of AI in the context of an evidence-based business decision support process.</td>
<td>I</td>
<td>I</td>
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I = Introduced; D = Developed; R = Reinforced; A = Assessed Individually for Achievement
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<tr>
<td><strong>MBAN 5110</strong> Predictive Modeling</td>
<td>I</td>
<td>R</td>
<td>D</td>
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<tr>
<td><strong>MBAN 5120</strong> Data Management &amp; Programming</td>
<td>I</td>
<td>I</td>
<td>R</td>
<td>D</td>
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<tr>
<td><strong>MBAN 5140</strong> Visual Analytics</td>
<td>D</td>
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<td>R</td>
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<tr>
<td><strong>MBAN 6110</strong> Data Science I</td>
<td>A</td>
<td>R</td>
<td>R</td>
<td>A</td>
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<tr>
<td><strong>MBAN 6120</strong> Data Science II</td>
<td>R</td>
<td>R</td>
<td>D</td>
<td>A</td>
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<tr>
<td><strong>MBAN 6300</strong> Advanced Spreadsheet Modeling &amp; Programming for Business</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>R</td>
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<tr>
<td><strong>MBAN 6400</strong> Multivariate Methods for Business Analytics</td>
<td>A</td>
<td>A</td>
<td>A</td>
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<tr>
<td><strong>OMIS 6350</strong> Advanced Spreadsheet Modeling &amp; Programming for Business</td>
<td>D</td>
<td>D</td>
<td>R</td>
<td>A</td>
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<tr>
<td><strong>GS/PHIL 5340</strong> Ethics of AI</td>
<td>R</td>
<td>R</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td><strong>MBAN 6090</strong> Analytics Consulting Project</td>
<td>R</td>
<td>R</td>
<td>A</td>
<td>A</td>
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<tr>
<td><strong>MBAN 5330</strong> Big Data Fundamentals and Application</td>
<td>A</td>
<td>A</td>
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<tr>
<td><strong>MBAN 6440</strong> Multivariate Methods for Business Analytics</td>
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<td><strong>3. Ethics &amp; Social Responsibility</strong></td>
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<td>3.1 Identify the ethical and social responsibilities related to the collection, analysis, and reporting of data.</td>
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<td>R</td>
<td>R</td>
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<td>3.2 Describe, analyze, and devise solutions for ethical and social issues that arise in business analytics.</td>
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New Course Proposal Form

The following information is required for all new course proposals. To facilitate the review/approval process, please use the headings below (and omit the italicized explanations below each heading).

1. **Program:** Philosophy
2. **Course Number:** GS/PHIL 5340
3. **Credit Value:** 3.0
4. **Long Course Title:** Ethics and Societal Implications of Artificial Intelligence
5. **Short Course Title:** Ethics of AI
6. **Effective Session:** Winter 2019
7. **Calendar (Short) Course Description:**
   This course is intended for students with professional interest in the social and ethical implications of AI. Topics include theoretical issues (could AI ever have moral rights?), practical issues (algorithmic bias, labour automation, data privacy), and professional issues (tech industry social responsibility).

8. **Expanded Course Description:**
   This course provides an overview of social and ethical issues arising from emerging Artificial Intelligence technology. The course will explore both existing and future technology applications, with a focus on learning to recognize and anticipate novel ethical challenges. By practicing ethical analysis in written and oral presentation, students will develop future-oriented skills applicable to technologies not yet invented. Topics, that are currently relevant or in the near future, will include algorithmic transparency and bias, big data surveillance and privacy, autonomous robotics in transport and warfare, economic and legal consequences of labour automation, use of robots as caregivers, and the effects of AI-human interaction on human ethical behavior. Topics, that are relevant in the long term, will include theoretical issues such as whether AI can or should ever make independent ethical decisions, whether AI might ever be entitled to moral rights of its own, and how humanity can contain the risks of 'superintelligent' future AI. The course will also consider whether the tech industry needs its own set of AI-related professional ethics (modeled on medical, business, and engineering ethics). What are the distinctive social responsibilities of AI companies and research institutions? What are the obligations of individual AI professionals?
9. Rationale:
Recently, the province of Ontario announced an initiative to increase the number of AI-related master’s graduates to 1,000 per year. The Vector Institute is spearheading this initiative. It has formulated essential requirements for AI-related graduate programs, based on consultation with more than 150 experts. One of these requirements is that “the program has learning outcomes related to the ethics and societal implications of AI.” This course is proposed to meet that outcome. York University already has some AI-related graduate programs (Schulich’s Masters program in Business Analytics and Lassonde’s Masters program in Computer Science (specialization in AI)), and several others are being developed.

Course learning outcomes
● Describe and explain a number of different ethical and social issues associated with artificial intelligence and digital technology, such as the feasibility of coding ethical norms into AI programs, the possibility of creating artificial moral beings, the impact on individual privacy and autonomy of big data collection, and the prospect that AI systems will render many human occupations redundant.
● Apply basic moral concepts, such as justice, fairness, autonomy, and privacy, to the context of artificial intelligence systems and digital technology.
● Illustrate some of the ethical and social implications of AI using real and hypothetical examples, based on knowledge of AI technology and basic principles of moral reasoning and deliberation.
● Debate various positions and argue for conclusions concerning the ethical and social implications of AI, and present arguments and conclusions in classroom debate settings, oral presentations, and written work.
● Inculcate an intellectual habit of asking ‘should we?’ questions, not just ‘can we?’ questions, when evaluating professional projects.

Program learning outcomes
Given that this course will become a requirement for the Masters program in Business Analytics and the Masters program in Computer Science (specialization in AI), the learning outcomes of both programs are attached.

10. Evaluation:
20% - Group Presentation. Each group will be assigned a topic from the syllabus. On the corresponding date, they will report to the class on real-world examples of technologies, applications, and/or business strategies that are implicated in the day’s topic. Assessment will be based upon clarity and research thoroughness.
30% - Group Project. By the end of the term, each group will submit a project consisting of public-facing ethical analysis of a current or emerging AI application. This can take the form of a website or video upload, or other medium with instructor approval. Assessment will be based upon accessibility to a non-specialist audience, thoroughness of research, and demonstrated ability to anticipate and motivate ethical arguments on multiple sides of a complex social issue.
15%, 15%, and 20% - Three individual writing assignments, 3-5 pages in length. These will take the form of ‘Should we?’ memos; documents written for internal circulation in a hypothetical tech-oriented company, discussing an assigned prompt. These will be due at
equal intervals throughout the term and will correspond to the main topics of the course (i.e. one each on Theoretical Issues, Practical Issues, and Professional Issues).

11. Integrated Courses:
Not applicable.

12. Crosslisted Courses:
Not applicable.

13. Faculty Resources:
Provide the names of faculty members in your program qualified to teach this course. Stipulate the frequency with which you expect this course to be offered, including the impact that this course will have on faculty resources.

Faculty members: Regina Rini (Philosophy), Muhammad Ali Khalidi (Philosophy), Verena Gottschling (Philosophy), Kristin Andrews (Philosophy), Dirk Matten (Schulich)
Frequency: once a year

14. Physical Resources:
The course will be taught at the new Cheryl and Robert McEwen Graduate Building of the Schulich School of Business. Additionally, the Deloitte Schulich Cognitive Visualization and Analytics Lab will be available for instructors teaching this course.

15. Bibliography and Library Statement:
Overview Books and Articles
Robot Ethics 2.0: From Autonomous Cars to Artificial Intelligence. Patrick Lin, Keith Abney and Ryan Jenkins (eds.) 2017. OUP.
‘What should we want from a robot ethic’ Peter Asaro. 2006. International Review of Information Ethics. 6(12): 9-16.

Theoretical Issues
Can machines be moral agents at all?


**How do you teach morality to AI?**


**Can AI have moral rights?**


Superintelligence and AI safety


Professional Issues

Decision-making and responsibility for ethics in AI


Decisions and responsibility: the case of autonomous vehicles


**Tech industry social responsibility and professional ethics**


**Practical Issues**

**Algorithmic transparency and bias**


**Big data, privacy, and surveillance**


**Labour automation and job loss**


https://www.ft.com/content/de07e776-2172-11e5-ab0f-6bb9974f25d0#axzz4Bgxb9U00


‘Is there (or should there be) a right to basic income?’ Jurgen De Wispelaere and Leticia Morales. 2016. *Philosophy and Social Criticism* 42(9): 920-936.


**Caregiving and robotics**


**AI and the legal system**


How will AI affect human ethical behavior?
‘Will big data algorithms dismantle the foundations of liberalism?’. Daniel First. Forthcoming. *AI and Society*  
https://link.springer.com/article/10.1007/s00146-017-0733-4

Please submit completed forms and required supporting documentation by email to the Coordinator, Faculty Governance – mmschiff@yorku.ca