



FOR APPROVAL

PUBLIC

OPEN SESSION

TO: Academic Affairs Committee

SPONSOR: Amrita Daniere, Vice-Principal Academic and Dean
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PRESENTER: Louis Florence, Director, Undergraduate Programs, Management
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DATE: January 2, 2017 for January 9, 2017

AGENDA ITEM: 3

ITEM IDENTIFICATION:

Major Modification: Minor in Business, Science, and Entrepreneurship, Department of Management, Institute for Management and Innovation (IMI)

JURISDICTIONAL INFORMATION:

Under section 5.6 of its terms of reference, the Academic Affairs Committee is responsible for major and minor modifications to existing programs.

GOVERNANCE PATH:

1. Academic Affairs Committee [For Approval] (January 9, 2017)

PREVIOUS ACTION TAKEN:

No previous action in governance has been taken on this proposal.

HIGHLIGHTS:

This is a proposal to introduce a new freestanding minor program (where there is no existing specialist or major) in Business, Science, and Entrepreneurship from the Department of Management. Students would be eligible to enroll in the proposed new Minor subject post as of March 14, 2017, with courses commencing in the Fall semester of 2017.

This proposed Business Minor is designed to equip students pursuing an education in the sciences with the fundamentals of business. It will provide UTM science students with a structured opportunity to learn business principles and concepts with examples drawn from the sciences. Having a strong knowledge of a specific science discipline coupled with the fundamentals of business would allow students the opportunity to evaluate and make decisions

while taking into account a greater variety of factors. Program requirements, learning outcomes, and degree level expectations are detailed in Section 7 of this proposal.

Wide consultation was done throughout the development of this program proposal. Degree bound Bachelors of Sciences students were surveyed and respondents indicated significant interest in such a business minor. At UTM, support was received from individuals from the Office of the Dean, Office of the Registrar, Office of the Principal, the Institute for Management and Innovation (IMI), and Science Departments, all of whom were consulted and viewed the business minor proposal as a great initiative. External to UTM, the University of Toronto Scarborough (UTSC) Department of Management and the Rotman School of Management at the St. George campus were consulted and voiced no objections with the UTM Department of Management offering a Minor in Business, Science, and Entrepreneurship.

FINANCIAL IMPLICATIONS:

There are no net implications for the campus' operating budget.

RECOMMENDATION:

Be it Resolved,

THAT the proposed New Minor in Minor in Business, Science, and Entrepreneurship, proposed by the Department of Management, offered by the Institute for Management and Innovation (IMI), recommended by the Vice-Principal Academic & Dean, Professor Amrita Daniere, and as described in the proposal dated November 22, 2016, be approved, effective September 1, 2017.

DOCUMENTATION PROVIDED:

Item Major Modification: New Minor in Minor in Business, Science, and Entrepreneurship, Department of Management, IMI



University of Toronto Major Modification Proposal: New Freestanding Minor where there is no Existing Specialist or Major

This template should be used to bring forward all proposals for major modifications of this type for governance approval under the University of Toronto's Quality Assurance Process.

What is being proposed: Please specify exactly what is being proposed. i.e., A new freestanding Minor (where there is no existing Specialist or Major) in ...	Free-standing minor program: A free standing Minor in Business where there is currently no existing Specialist or Major called Minor in Business, Science, and Entrepreneurship
Department / Unit (if applicable):	The Institute for Management & Innovation
Faculty / Academic Division:	University of Toronto Mississauga
Faculty / Academic Division Contact:	Anuar Rodrigues, Research Analyst, UTM Office of the Dean, anuar.rodrigues@utoronto.ca, 905-569-4332
Department/Unit Contact:	Louis Florence, Director, Undergraduate Programs, louis.florence@utoronto.ca, 905-569-4852 Lavan Puvaneswaran, Curriculum Support Officer, l.puvaneswaran@utoronto.ca, 905-569-4595
Version Date:	November 22, 2016

1 Summary

Please provide a brief summary of what is being proposed including:

- *a clear statement of the relationship of this to other programs*
- *the impetus for its development in brief*
- *any distinctive elements*

The Minor in Business, Science, and Entrepreneurship is an initiative by the Institute for Management & Innovation (IMI), the Department of Management and Science Departments at

UTM. A freestanding minor is defined as a minor where there is no existing Specialist or Major.

The motivation for such a minor is to provide students pursuing a Bachelor of Science degree at UTM with the fundamental business knowledge that would complement their science education and support their future success.

This Minor in Business, Science, and Entrepreneurship would be a new and unique offering at UTM. The majority of courses would be newly developed, taught by IMI faculty members and with a focus on fundamental business knowledge as well as the application of business concepts to the field of science.

2 Effective Date

Students would be eligible to enroll in the Minor in Business, Science, and Entrepreneurship subject post as of March 14, 2017 (first day to request Subject POSTs on ACORN at UTM) with courses commencing the Fall of 2017.

3 Academic Rationale

- *Describe what is being proposed and why*
- *If relevant, describe the mode of delivery (including online) and how it is appropriate to support students in achieving the learning objectives of the program*
- *Context*
 - *Discuss how the program addresses the current state of the discipline or area of study. (Identify pedagogical and other issues giving rise to the creation of this program. Where appropriate speak to changes in the area of study or student needs that may have given rise to this development)*
 - *Describe the consistency of the program with the University's mission and unit/divisional academic plan and priorities*
- *Distinctiveness*
 - *Identify any distinctive/innovative aspects of the proposed minor*
 - *As appropriate, speak to similar offerings elsewhere at the University of Toronto or at other universities*

The objective of this minor is to provide UTM science students with a structured opportunity to learn business principles in an offering that recognizes and illustrates the business concepts with examples drawn from the sciences. Based on the comments/feedback section of a Business Minor survey completed by 440 UTM students pursuing a BSc. degree, many indicated that business skills would complement their science expertise and support their success in both entrepreneurial endeavors and within organizations.

Many other universities have similar offerings, specifically U of T St. George Engineering, York University and the University of Waterloo. The Engineering Business Minor is a collaborative

effort between Engineering and the Rotman School of Management. It is designed specifically for Engineering students interested in learning more about the business dimension of engineering—from finance and economics to management and leadership. In contrast, the York University and the University of Waterloo business minor is intended for any student not enrolled in a business program at the undergraduate level.

Currently, science students at UTM have very limited exposure to the field of business as business courses are restricted to management students pursuing a major/specialist. Students looking to pursue a partial business education do have the option of pursuing a major in management while pursuing another major in the sciences, however this option has drawn very little interest from students thus far, reflected by only 24 students currently enrolled in the management major out of 176 management students. Pursuing such a double major would also prevent science students from being able to complete specialist programs within their science fields of interest. The higher tuition that would apply while only pursuing a partial education in business (management major) is also likely a strong deterrent.

Having the opportunity to complete a business minor tailored towards science students, would not only give science students a broader array of skillsets but would also make science programs at UTM even more attractive to prospective students. Those who enroll and are accepted in the minor would be exposed to more than one field of study, hence making themselves more marketable for endeavors they choose to pursue post undergraduate studies. It would also appeal to those students who are undecided about their future career path and would like to use their undergraduate studies as an opportunity to help make a decision on which direction to pursue.

The courses offered by the Minor in Business, Science, and Entrepreneurship will be distinct from the structure of current undergraduate Management course offerings. This will primarily be accomplished by structuring courses so that they tie back to science oriented business scenarios. For example, an accounting course could involve analysis of resource statements of pharmaceutical or chemical companies. Similarly, a strategy course could involve the analysis of how companies have effectively introduced a new drug to the mass consumer market. Given 6 of the 8 half-courses proposed for the Minor in Business, Science, and Entrepreneurship would be new courses, it would also allow for consultations from Science Departments at UTM prior to being developed. More specifically, these new IMI courses will be developed by IMI business faculty with consultation from Science Department faculty members to ensure examples and cases that resonate with Science students are being integrated into said courses.

Furthermore, such a minor program would fit well with UTM and IMI's goal of providing interdisciplinary learning opportunities for students, as demonstrated by the variety of offerings already present at the graduate level.

4 Need and Demand

- *Provide a brief description of the need and demand for the proposed minor focusing, as appropriate, on student interest, societal need, employment opportunities for prospective graduates, accreditation requirements*

The Institute for Management and Innovation in collaboration with the Office of the Registrar sent out a survey to approximately 5,000 BSc. degree bound students to which 440 responded. 308 (70%) respondents indicated they would have significant interest or would definitely enroll in a business minor even with the realization that it would reduce the number of non-program elective courses they could take. Dozens of comments from students who completed the survey indicated a great deal of enthusiasm and interest in the proposed Minor in Business, Science, and Entrepreneurship.

Based on (1) consultation with members in the Office of the Registrar, (2) the current average class size of undergraduate management courses, (3) resource limitations and (4) for pedagogical reasons, the proposed Minor in Business, Science, and Entrepreneurship would initially start off as a Type 3 subject POST program which would allow for a competition among applicants meeting the minimum requirements for a limited number of spaces. Fifty students will be admitted per year. Our survey indicated that these students would most likely come from the Biology, Psychology, Chemistry & Physical Sciences and Geography Departments. Students in our survey indicated interest for this proposed minor program based on their expectation that it would facilitate their entry into the workforce and/or help equip them to launch and operate their own business. We could imagine a scenario where, as this new program gets established, the demand would warrant increasing the number of students admitted per year or perhaps converting the Subject POST of the minor into a Type 2 which will require specific course(s) and specific GPA and/or grades but imply a limited number of spaces.

Moreover, a Business Minor for Science Students would have a benefit to employers and society given that students would have two skillsets to utilize in any of their future endeavors. Having a strong knowledge of a specific science discipline coupled with the fundamentals of business would allow students the opportunity to evaluate and make decisions while taking into account a greater variety of factors. For example, an understanding of accounting and finance would allow those students who end up leading research projects the ability to more effectively budget and report on said projects. To the same extent, those who end up pursuing entrepreneurial endeavors would have more insight on how to effectively manage projects as well as market products. Lastly, a business minor would equip those students who enter the workforce subsequent to their undergraduate studies with a stronger understanding of all aspects of business.

Below are some of the many student comments from our survey which highlight the benefits and demand for such a minor:

"The skills taught in these courses would be vital to pursuing any career in a business environment, including science. Most jobs today that use science involve basic management and business skills and strategies that most

scientists lack. This is a long overdue option that I am extremely interested in, and excited for.”

“This sounds like an excellent idea. I am currently doing an internship for an IT corporation and find that I am usually lost when the discussions in our meetings turn towards the business matters (as opposed to the technical skill-based matters which I am more familiar with). This shows me that having an optional business minor would definitely help us be more valuable and competitive in the workforce after graduation.”

“I believe that this would be an amazing opportunity for science students. I always considered taking business, as one day I hope to become a doctor. A lot of doctors open their own practices. Therefore, having a business minor as an undergraduate student in science would give me the knowledge necessary to open my own practice. I wish this was offered before, but hopefully it becomes a minor offered to the new generation of undergraduates.”

5 Admission / Eligibility Requirements

- *Describe any specific requirements that students must meet to be eligible for the proposed minor and how these will be administered*

Based on consultation with the Registrar’s Office, the current average class size of undergraduate management courses, resource limitations and for pedagogical reasons, the Minor in Business, Science, and Entrepreneurship would initially start off as a Type 3 (limited enrolment) program with 50 students admitted per year. Admission will be based on CGPA, with the students that have the highest CGPA offered one of the 50 seats available in the minor.

Students applying for admission to this program will need to have completed 4.0 credits, have applied for, or be enrolled in a Science Specialist or Major Subject POST and have achieved a minimum grade of 63% in ECO100Y5.

Once enrolled in the Minor in Business, Science, and Entrepreneurship, students will be required to maintain enrolment in a Science Specialist or Major Subject POST, otherwise they will be removed from the program.

The Institute for Management and Innovation will need to monitor students enrolled in the Minor in Business, Science, and Entrepreneurship program to ensure that they meet the joint Science Specialist or Major Subject POST enrolment requirement.

6 Requirements for the Minor

- *Describe in your own words the requirements and structure of the minor*

The Minor in Business, Science, and Entrepreneurship would require students to complete the following 4.0 credits:

ECO100Y5 (EXISTING - Introduction to Economics) – potentially in first/second year

IMI201H5 (NEW – Fundamentals of Marketing) – potentially in second/third year once accepted into the minor

IMI202H5 (NEW – Principles of Human Resource Management) – potentially in second/third year once accepted into the minor

IMI203H5 (NEW – Essentials of Accounting: Financial & Managerial) – potentially in second/third year once accepted into the minor

IMI301H5 (NEW – Essentials of Finance) – potentially in third/fourth year once accepted into the minor

IMI302H5 (NEW – Managing Projects, Operations & Preparing a Business Plan) – potentially in third/fourth year once accepted into the minor

IMI303H5 (NEW – Technology Strategy) – potentially in third/fourth year once accepted into the minor

In addition to ECO100 which is already regularly offered by the Department of Economics, the 2017-2018 school year would offer only the 200 level Minor in Business, Science, and Entrepreneurship courses. In the 2018-2019 school year both the 200 and 300 level courses would be offered.

- *Provide (as an appendix)*
 - *An exact program description as it will appear in the calendar including all required courses and recommended electives and their prerequisites*
 - *A detailed copy of the program requirements as they will appear in the Undergraduate Calendar including all required courses and recommended electives and their prerequisites*
- *Provide as an appendix*
 - *A full list of the course numbers and titles, indicating clearly whether they are new/existing. (Please note that new courses need to be proposed and approved separately following established Faculty/Divisional procedures)*

Please see Appendix for proposed calendar copy.

Please see Appendix for a full list of the course numbers and titles, indicating clearly whether they are new / existing.

7 Program Structure, Learning Outcomes, and Degree Level Expectations

- *Address how the design, structure, requirements and delivery of the program support the program learning outcomes and degree level expectations*
- *Identify DLEs, identify how each DLEs is addressed in this particular program, and specify how the program design and requirements support the attainment of student learning outcomes. Proponents may find the language in the table useful or should feel free to use their own*

Degree Level Expectations	Program Learning Outcomes	How the program design / structure supports the degree level expectations
<p>1. Depth and Breadth of Knowledge</p> <p>Depth and breadth of knowledge in this stream is represented by a broad base of understanding of management theory and practice.</p>	<p>Students will be able to use appropriate management terminology and explain the fundamental concepts that characterize how organizations function.</p> <p>Students will be able to discuss how different roles and functions of business contribute to the operations and growth of an organization.</p>	<p>The program design and requirement elements that ensure these student outcomes for depth and breadth of knowledge are:</p> <ol style="list-style-type: none"> 1) Completion of the minor will support breadth of understanding across business disciplines. 2) A number of specialized courses will be particularly important in shaping students' knowledge of the core functions of business: IMI201H5 (NEW – Fundamentals of Marketing), IMI202H5 (NEW – Principles of Human Resource Management), IMI203H5 (NEW – Essentials of Accounting: Financial & Managerial), IMI301H5 (NEW – Essentials of Finance), IMI302H5 (NEW – Managing Projects, Operations & Preparing a Business Plan), IMI303H5 (NEW – Technology Strategy)
<p>2. Knowledge of Methodologies</p> <p>Knowledge of methodologies in this domain is reflected by an understanding of the various analyses and processes involved in the management and operation of organizations.</p>	<p>Students will be able to describe the analysis undertaken in management situations when evaluating or selecting an organizational process.</p> <p>Students in the Minor in Business, Science, and Entrepreneurship will be able to explain the processes used in managing and operating in organizations through the various business functions.</p>	<p>As mentioned in Section 1 of the proposed learning outcomes and degree level expectations, this program will equip students with a broad base of knowledge via completion of the specialized Minor in Business, Science, and Entrepreneurship courses.</p>
<p>3. Application of Knowledge</p> <p>Application of knowledge is understood in the Minor in Business, Science, and Entrepreneurship stream as being able</p>	<p>Students will be able to apply management theories to the analysis of issues encountered in real world organizations.</p>	<p>Knowledge will be applied throughout the completion of courses in the Minor in Business, Science, and Entrepreneurship. The new specialized courses designed specifically for Science Students will be well-suited for knowledge application that requires students to incorporate both their education in science and business during coursework, case assignments, and applied projects.</p>

<p>to adopt the methodologies named in Section 2 of the proposed learning outcomes and degree level expectations to make informed choices about management issues.</p>		
<p>4. Communication Skills</p> <p>Communication skills will be demonstrated through accurate and clear oral and written presentations, to business professionals, of information, arguments, and analyses.</p>	<p>Students will be able to produce a range of effective business communications, in both oral and written form, for an audience of business professionals.</p>	<p>The development of written and oral communication skills will be emphasized in all Minor in Business, Science, and Entrepreneurship courses and will be evaluated through written case analysis and presentations to peers and industry leaders.</p>
<p>5. Awareness of Limits of Knowledge</p> <p>Awareness of limits of knowledge is demonstrated by a familiarity with contingency approaches to management and an awareness of the impact of context on organizations.</p>	<p>Students will be able to explain how processes from Section 2 have been adapted for a specific organizational context.</p> <p>Students will be able to apply the “contingency approach” to problems encountered in real world organizational contexts.</p>	<p>Through case studies and other learning methods, students will be introduced to the “contingency approach” to Management. This approach emphasizes an appreciation of uncertainty and an awareness of the limitations of a one-fits-all approach to Management.</p> <p>In the Minor in Business, Science, and Entrepreneurship program, students will become familiar with identifying, evaluating, and applying multiple approaches or methodologies to solve Management problems.</p>
<p>6. Autonomy and Professional Capacity</p> <p>Autonomy and professional capacity is demonstrated by students who exercise initiative and take responsibility for actions and decisions undertaken independently and within groups.</p>	<p>Students will be able to demonstrate professional behaviour in individual and group settings that mirror real world contexts.</p>	<p>A fundamental goal of the Minor in Business, Science, and Entrepreneurship is to prepare students for the next stage of their career or studies; in support of this goal, the development of autonomy and professional capacity will be stressed in all IMI courses. In particular, throughout the program, students will be asked to complete work in individual and group settings that mirror real world contexts.</p>

8 Assessment of Teaching and Learning

- *Describe how the methods for assessing student achievement are appropriate and effective relative to established program learning outcomes and degree level expectations*

Students will be assessed in the manner common to all BCom/BBA programs at UTM. Typically, student performance in each course will be assessed using a combination of tests, exams, assignments, papers, class participation and presentations.

9 Consultation

- *Describe any consultation with programs and units that may be affected.*

The Minor in Business, Science, and Entrepreneurship would be a new initiative across U of T. Consultation has been had with senior levels of leadership at UTM such as the Acting Principal (Ulrich Krull), Registrar (Diane Crocker), Chair of the Department of Management (Mihkel Tombak), the Director of IMI (Pierre Desrochers) and faculty from Science Departments, all of whom see this minor as a great initiative for both UTM and U of T. Please refer to Section 11 for a full listing of faculty names and respective departments.

The proposed Minor in Business, Science, and Entrepreneurship has also received strong interest from current UTM Science Students, as determined by a survey conducted in the Winter 2016 term.

The UTSC Department of Management and the Rotman School of Management at St. George have no concerns with the UTM Department of Management offering a Minor in Business, Science, and Entrepreneurship as per the below responses.

Per David Zweig (Chair, UTSC Department of Management) on September 23, 2016:

Hi Mihkel:

Good luck with the program. I have no issues or objections.

Best,

Dave

Per Susan Christoffersen (Vice- Dean Undergraduate and Pre-experience Programs, Rotman) on September 27, 2016:

Mihkel,

Thank you for consulting with us on this new proposal. Neither Ken nor myself see any issues with the program. We believe there is strong demand for these business skills amongst students in other disciplines. Good luck with the program proposal!

Best,

Susan Christoffersen

We expect some increase in the demand for ECO100Y (perhaps an additional 200 spots) as a result of this new program, as this course is a prerequisite for it. We have examined the

capacity of the 5 winter sections and 1 summer section versus the demand for this course based on summer 2016 and fall/winter 2016-2017 scheduling. While we expect the current capacity is sufficient to handle the expected increase, we are in active consultation with the Office of the Registrar and the Economics Department (the Chair, Associate Chair and the lead faculty member for ECO100Y) about the possible need to increase the capacity of the summer offering of ECO100Y, in particular, given that science students have a fairly heavy first year load, and so some of the increase may fall on the summer section. In addition, we will ask to be consulted in the scheduling of the winter sections of ECO100Y in 2017-2018 and beyond to ensure that these sections don't conflict unduly with the schedules of the science students who are most likely to be interested in pursuing the Minor in Business, Science, and Entrepreneurship.

10 Resources

- *Describe any resource implications of the change(s) including but not limited to faculty complement, space, libraries, and enrolment/admissions.*
- *Please be specific where this may impact significant enrolment agreements with the Faculty/Provost's Office.*
- *Indicate if the major modification will affect any existing agreements with other institutions, or will require the creation of a new agreement to facilitate the major modification (eg. Memorandum of Understanding, Memorandum of Agreement, etc). Please consult with the Provost's Office (vp.academicprograms@utoronto.ca) regarding any implications to existing or new agreements.*

Enrollment and completion of the Minor in Business, Science, and Entrepreneurship will require students to complete the prerequisite course ECO100Y5. Based on consultation with the lead course instructor (Lee Bailey) for ECO100Y5 we expect that any additional demand for ECO100Y5 due to the Minor in Business, Science, and Entrepreneurship can be handled without adding any additional sections.

The 6 new 0.5 credit IMI courses would require the hiring of two new faculty members to the Department of Management to oversee the development and operation of the program and teach the 6 new IMI courses, though some of these courses may be taught by other faculty/sessional instructors. Student advising and admissions work for the program, will be handled by the Academic Advisor for the Commerce/Management Programs (Mary Wellman) with assistance from Lavan Puvaneswaran, Curriculum Support Officer for the Commerce/Management Programs. As this is an undergraduate Business program, it will be managed by the Director, Undergraduate Programs for the Department of Management (Louis Florence).

We do not foresee any space, libraries or enrolment/admissions concerns stemming from offering this Minor in Business, Science, and Entrepreneurship.

This Minor in Business, Science, and Entrepreneurship will not affect any existing agreements with other institutions and will not require the creation of any new agreements. Specifically,

this minor is exclusive to students of the UTM campus hence a distinct agreement is not required. In addition, UTM Science Department faculty have been consulted throughout the creation of this proposal and the Registrar's Office has agreed to send out a communication informing all Science students of this new minor once it is available for enrollment.

10.1 Faculty requirements

- *Brief statement to provide evidence of the participation of a sufficient number and quality of faculty who will actively participate in the delivery of the program*
 - *Discuss the role of any adjunct or contractual faculty*
 - *Comment on the provision of supervision of experiential learning opportunities, as appropriate*
 - *If relevant, describe the plan to provide additional faculty resources to support the program*

The proposed Minor in Business, Science, and Entrepreneurship at UTM has received a great deal of support and enthusiasm from members of the Institute for Management & Innovation. Various faculty members from several departments will be involved in the design of the various courses offered under the umbrella of the Minor in Business, Science, and Entrepreneurship, particularly the effort to find examples and cases and perhaps provide guest lecturers that will make the courses relevant to students completing majors or specializations in science programs. However, the bulk of the development work will be undertaken by Management faculty, and all courses will be delivered by Management faculty.

The Dean has agreed to a search for two new faculty members, one tenure stream Marketing faculty member for 2017-2018, and a second one, which could be teaching stream or tenure stream for 2018-2019, the decision to be based on input from the Department of Management, but supported with evidence from the Department's self-study and external review, as well as pending approval of the proposed program.

Table 1: Detailed List of Faculty Committed to Contribute to the Program in some fashion*

Faculty name and rank	Home unit	Area(s) of Specialization
Mihkel Tombak – Professor	Department of Management	Strategy
Louis Florence – Associate Professor, Teaching	Department of Management	Finance
Soo Min Toh – Associate Professor	Department of Management	Organizational Behaviour & HR Management
Manfred Schneider – Associate Professor, Teaching	Department of Management	Accounting
Matt Osborne – Assistant Professor	Department of Management	Marketing

Faculty name and rank	Home unit	Area(s) of Specialization
Alberto Galasso	Department of Management	Strategy
Andreas Park - Associate professor	Department of Management	Finance
Stuart Kamenetsky	Psychology Department	Disability, child welfare
Christoph Richter, Associate professor, Teaching	Biology Department	Evolution, Scientific Literacy
Paul Piunno, Associate Professor, Teaching	Chemical and Physical Sciences	Analytical Chemistry, Chemistry Education
Alan Walks, Associate Professor	Geography Department	Geography of Finance
Lee Bailey, Associate Professor, Teaching	Department of Economics	Economics

*Department of Management faculty will be heavily involved in course development for the new IMI courses and may be instructors for said IMI courses. Consultation has already been had with listed Science Department Faculty and will continue to be had in order to ensure all IMI courses have appropriate integration of material (ex. Science examples and case studies) relevant to Science students. Discussion was had with the Department of Economics to ensure sufficient enrollment opportunity for students interested in pursuing the Minor in Business, Science, and Entrepreneurship to complete ECO100.

10.2 Space/Infrastructure

- Address any unique space/infrastructure requirements including information technology, laboratory space and equipment, etc.

We do not foresee this Minor in Business, Science, and Entrepreneurship requiring any unique space/infrastructure requirements.

11 UTQAP Process

Steps	Approvals
Development/consultation with the Unit	
Consultation with Dean’s Office (& AP, VP)	
	Unit level approval as appropriate
	Faculty/Divisional Council

Submission to Provost's Office	
Report to AP&P	
Report to Ontario Quality Council	

Appendix A: Outline of Program

Minor in Business, Science, and Entrepreneurship (4.0 credits)
<p>First Year: (1.0 credits)</p> <p>ECO100Y5 Introduction to Economics A survey course with emphasis on the basic concepts and techniques of macro and micro economic theory. The concepts introduced will include: national income and its determination; monetary and fiscal techniques; the derivation and use of supply and demand schedules; the theory of the firm; and principles of comparative advantage and foreign exchange fluctuations.</p>
<p>Upper Years: (3.0 credits)</p> <p>IMI201H5 Fundamentals of Marketing (NEW) An introduction to the fundamentals of market definition, consumer behaviour, and the principal marketing functions: product line development, pricing, distribution, promotion, salesforce management, advertising, research, and planning.</p> <p>IMI202H5 Principles of Human Resource Management (NEW) Human Resource Management involves everything related to the employer-employee relationship and is about supporting and managing the organisation's people and associated processes.</p> <p>IMI203H5 Essentials of Accounting: Financial & Managerial (NEW) Financial accounting revolves around the preparation and understanding of financial statements, including income statements, and balance sheets which help management and other stakeholders understand the state of affairs within an organization. Managerial accounting provides management with information, analysis and reports that support management's decision making.</p> <p>IMI301H5 Essentials of Finance (NEW) Finance uses accounting data to help businesses make decisions about investments and paying for those investments with debt and equity. Elements include risk and return, the time value of money, discounted cash flow, capital markets including stock markets, bond markets, foreign exchange markets and commodity markets.</p> <p>IMI302H5 Managing Projects, Operations & Preparing a Business Plan (NEW) Every business needs to formulate the strategies by which it will compete successfully in the market place, and plan for the implementation of these strategies, which may include joint</p>

ventures, strategic alliances, etc. This requires operational capabilities, the preparation of business plans and project management skills.

IMI303H5 Technology Strategy (NEW)

Businesses typically want to grow and compete. Science oriented businesses rely on innovation, protected by intellectual property rights and patents, to gain and sustain competitive advantage. Entrepreneurial science-based start-up ventures especially need a strong intellectual foundation, and they need to raise capital.

Appendix B: Proposed Calendar Entry

Minor in Business, Science, and Entrepreneurship

The Minor in Business, Science, and Entrepreneurship has been designed to equip those pursuing an education in the sciences with the fundamentals of business. The minor focuses on covering the major elements of business that any individual in a science field can expect to come across in one form or another, throughout their studies and career.

Students will have the opportunity to learn the fundamentals of business while also obtaining an understanding of how this knowledge is relevant from a scientific perspective via science based case studies, guest lectures and other initiatives.

Limited Enrolment --Enrolment in this program is limited to students who meet the following criteria:

1. Enrolled in a UTM Science Specialist or Major Subject Post.
2. Prerequisite Course: ECO100Y5 (63%).
3. Completion of 4.0 credits.
4. Cumulative Grade Point Average (CGPA): Each year the Management Department sets a minimum required CGPA. This will vary from year to year and is based, in part, on supply and demand.

Note: Students are required to remain enrolled in a Science Specialist or Major program in order to complete this Minor in Business, Science, and Entrepreneurship program.

Program requirements:

Completion of the following 4.0 credits ECO100Y5, IMI201H5, IMI202H5, IMI203H5, IMI301H5, IMI302H5, IMI303H5