# UNIVERSITY OF TORONTO AT MISSISSAUGA
# MAJOR CURRICULUM CHANGES FOR 2006-07

## A. New Programs

### *1. Information Security − Specialist*

Program Description and Rationale

The proposed program in Information Security grows out of the 'Stepping up' plan for UTM's Department of Mathematical and Computational Sciences and draws on specific strengths within the department. The introduction of this program will involve the creation of a small number of new courses on topics ranging from the basics of cryptography, to concepts such as perfect secrecy, the design of ciphers, primality testing and proving, topics from algebraic geometry including elliptic and hyperelliptic curves, etc. The remaining courses will be drawn from those currently offered within the Department. The students enrolled in this program would also interact with the GANITA research lab, a lab whose current focus is encryption and security. In the recent past, GANITA has employed undergraduate specialists and majors from both computer science as well as mathematics to participate in the research activity of the lab. It is anticipated that the resource implications will be minimal (approximately one stipend), with teaching of new courses provided by current faculty.

The timeliness of a program in this area is evident. However, the program requires upper level courses in both Computer Science and Mathematics, so we do not initially expect large enrolments (perhaps 10-15 students per year). We expect the Computer Science Specialist program to continue to draw more students. Other departments and divisions are not affected; however, there is a related development in the introduction of a specially designed Computer Forensics course at the 200-level for students in the Forensic Sciences program.

Permanent faculty with a direct interest in the program include mathematicians V. Kumar Murty (number theory and cryptography), V. Blomer (number theory), and computer scientists (C. Rackoff (computational complexity and cryptography), S. Saroiu (networks and operating systems) and G. Scott Graham (operating systems).

Learning outcomes for this program are as follows:

1. Understand the underlying principles (concepts and methodologies) of information security.
2. Understand the different facets of information security (including algorithms, protocols, software, operating system and network components) and how they relate to each other.
3. Acquire knowledge of how the mathematical and computer science aspects of information security interact.
4. Acquire sufficient theoretical and practical knowledge of the area so as to continue learning at more advanced levels.
5. Acquire exposure to solving research problems in information security through interaction with the GANITA Lab.

Program Requirements

Within an Honours degree, 15.0 credits are required.

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

1. Prerequisite Courses:
   A minimum of 4.0 credits to include CSC148H5 (65%), MAT102H5 (60%), 137Y5 (60%).
2. Cumulative Grade Point Average (CGPA):
   The minimum CGPA is determined annually. It is never lower than 2.0.

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| First Year | CSC108H5, 148H5, 290H5; MAT102H5, 137Y5; STA107H5 |
| Second Year | CSC207H5, 209H5, 236H5, 258H5, 263H5; MAT223H5, 224H5, 232H5; STA 257H5 |
| Third Year | CSC 343H5, 347H5, 363H5, 369H5, 373H5; MAT 301H5, 302H5, 315H5 |
| Third and Fourth Years | CSC 458H5; two of (CSC 422H5, 423H5, 427H5; MAT 442H5); three half courses from any 300 or 400 level UTM CSC courses (except for CSC492H5 and CSC493H5). |

The program has a writing requirement, which students can fulfill either through completion of a course designed specifically for computer science students or through completion of a course from a specially selected list of writing-intensive courses.

To give you a clearer picture of the kinds of courses that will support this program, the following courses will be introduced:

**CSC347H:**
**Introduction to Information Security (SCI)**
**Description:** An investigation of many aspects of modern information security. Major topics covered: techniques to identify and avoid common software development flaws which leave software vulnerable to crackers; utilizing modern operating systems security features to deploy software in a protected environment; common threats to networks and networked computers and tools to deal with them; and cryptography and the role it plays in software development, systems security and network security.

**MAT302H5:**
**Finite Fields and Applications (SCI)**
**Description:** This course will consist of an introduction to the theory of finite fields. We will also discuss some of the many practical applications of finite fields, including algebraic coding theory for the error-free transmission of information and cryptology for the secure transmission of information.

**CSC422H5:**
**Cryptography and Computational Complexity (SCI)**
**Description:** A rigorous introduction to the theory of cryptography from the perspective of computational complexity. The relationship of cryptography to the "P=NP" question. As time permits, topics will be chosen from: (i) definitions of different kinds of pseudorandom generators, relationships between them, and ways of constructing them; (ii) secure sessions using shared private key cryptography and public key cryptography; and (iii) signature schemes.

**CSC423H5:**
**Computer Forensics (SCI)**
**Description:** Introduction to the digital investigation of electronic evidence, the computer as a crime scene and as a party to a criminal offence, with a focus on network issues (intrusion detection, sniffer logs) and operating system issues (especially file system issues: hidden data, file metadata, deleted data). This course will build upon your background in operating systems theory and practice, and will introduce you to the tools and techniques of the computer forensic specialist in the Linux and Microsoft environments. Reference to Canadian computer crime case law.

**CSC427H5:**
**Computer Security (SCI)**
**Description:** Network attacks and defenses, operating system vulnerabilities, application security (e−mail, Web, databases), viruses, spyware, social engineering attacks, privacy, and digital rights management. The course will cover both attack techniques and defense mechanisms.

**MAT442H5:**
**Algebraic Aspects of Cryptography (SCI)**
**Description:** This course will explain how number theory, group theory, and finite fields are used to build algorithms for cryptography and data integrity. We will discuss symmetric algorithms (such as AES) and asymmetric algorithms (such as RSA and discrete log based public-key schemes such as ECC).

## *2. Management Specialist*

Program Description and Rationale

The program is being introduced to strengthen the portfolio of programs offered by this Department. It builds on the successful Major Program in Management offered by the Department by adding a requirement for four further credits. As the competitive arena changes, the Department wishes to differentiate its programs in ways that take advantage of demand and establish a strong presence in the market for Management degrees. Management is a popular discipline at the undergraduate level, and UTM's Major program has established itself well within the past decade, attracting good and highly motivated students. We wish to build on this by offering students the chance to study Management in greater depth. Entry will be restricted to ensure student quality is maintained and resources are available to provide the necessary teaching.

Less quantitatively oriented than the current Commerce program, the Management Specialist will provide a broader coverage of the management subdisciplines than the Major in Management, with the opportunity to pursue specific subdisciplines in greater depth. Students will, as a result, have a broader education in managing and organization, and be better fitted to take up specific roles in either private or public sector organizations.

The program has been discussed with St George's Commerce Programs Director and the Chair of the Department of Management, UTSC, and both have given it their full support. We fully expect that it will enhance the programs of the Department of Management, UTM, by increasing the numbers and diversity of the student intake and thereby allowing us to enrich the range of courses, elective and compulsory, from which students on new and existing programs can choose.

The program will be delivered in the manner normal for Management programs, using a mixture of pedagogies, including lectures, tutorials, case discussions, field research projects, and internships. Student progress will be monitored in the usual way, using a mixture of individual and group assignments, based on

tests, case analyses, problems, project reports and examinations. The program will be taught by full-time and sessional faculty of UTM's Department of Management, as part of planned faculty growth consistent with the enrolment growth projections of our approved Stepping Up plan.

Learning Outcomes:
Students completing the program will be informed about the state of knowledge in the field of management and its major subfields. They will be familiar with the important concepts and models in the field and with their application. They will leave with skills and competencies relevant to management tasks. Students will graduate with awareness of management practices and the relevant standards including ethical practice.

Program Requirements

Within an Honours degree, 12 credits are required.

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

1. Prerequisite courses:
   MGM101H5(63%), MGM102H5(63%); ECO100Y5(63%) in a minimum of 4.0 courses.

**2.** 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.

3. Applicants may be asked to provide further information about themselves, including their reasons for wishing to take the program and how they see it contributing to their education and career.

1. First year prerequisites (2.0 credits):
   MGM101H5, 102H5; ECO100Y5
2. Core courses (1.5 credits):
   MGM200H5, 300H5, 400H5
3. Management Disciplines (6.5 credits):
   MGM221H5, 222H5, 230H5, 252H5, 290H5, 320H5, 332H5, 371H5; MGT353H5, 363H5, 374H5; ECO200Y5
4. Statistics (.5 credit):
   STA218H5
5. Electives (select 1.5 credit):
   MGT452H5, 453H5, 455H5, 460H5, 461H5, 491H5, 493H5; MGD421H5, 422H5, 423H5

## ***3. Financial Economics − Specialist***

Program Description

Financial Economics has become one of the most popular fields within economics, both at the undergraduate and at the graduate levels. There is considerable demand for training in finance, largely reflecting the expansion of the financial sector and employment in that sector. While we have added courses in this field in recent years, we now believe that we can package these courses as a meaningful separate program of study that will attract students with a strong quantitative background. This program will also prepare students interested in graduate programs in Economics or Finance.

Students will benefit from the program in two ways. First, the program requirements will direct them to the most appropriate courses for their specialization goals. Second, upon graduation the label and quality of the degree should help students either to find jobs in the financial sector or to be admitted into graduate programs.

The department and the university will benefit from a program that we are confident will attract top students who upon graduation have many options to pursue rewarding careers.

Since our initial goal is to package courses we are currently offering, the proposal does not require additional resources. Likewise, the delivery and evaluation methods would continue being those that we currently use.

There are currently five faculty members at UTM specializing in subjects related to financial economics: Aivazian, Faig, Maheu, Park, and Zhu. Therefore, the department is well endowed with the human resources necessary to maintain the core courses for the new program.

**The educational outcomes of the this program will be to:**

- understand the underlying principles (concepts and methodologies) of financial economic
- understand the different elements of financial economics (including financial security pricing and efficiency of financial markets)
- acquire knowledge of how the fields of finance and economic analysis interact
- acquire sufficient theoretical and practical knowledge of the area and relevant skills to continue learning at more advanced levels and/or enter professional avenues that flow from study in this area.

Program Requirements

(13 full courses or their equivalent, including at least one 400−series full course or its equivalent.)

**Limited enrolment:** Enrolment in this program is limited to students with:
70% in ECO100Y1/100Y5;
63% in MAT133Y1/133Y5 or 60% in MAT134Y5/135Y1/135Y5 or 55% in MAT137Y1/138Y5;
63% in ECO206Y1/206Y5, 63% in ECO208Y1/208Y5, 63% in ECO227Y1/227Y5/STA(257H1, 261H1)/STA(257H5, 261H5)/STA(257H5, 248H5/258H5).

There will be a limited number of spaces available for which students can apply after completion of at least 8 full credits (including prerequisites listed above) and achievement of a CGPA to be determined annually by the Department of Economics. Students enrolled in this program cannot simultaneously be enrolled in any other Economics Specialist, Joint Specialist, Major or Minor Program or in the Commerce and Finance Program.

**Note:** This is a joint program with the Economics Department on the St. George Campus. Some required courses may be offered on one campus in any given year. Students registered at either campus may have to attend lectures on the other campus in such cases.

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| First Year: | ECO100Y5/100Y1;<br>MAT132Y5/133Y1/133Y5/134Y5/135Y1/135Y5/137Y1/137Y5/138Y5 |
| Higher Years: | 1. ECO206Y5/206Y1<br>2. ECO208Y5/208Y1<br>3. ECO227Y5/227Y1/STA(257H1, 261H1)/STA(257H5, 261H5)/STA(257H5, 248H5/258H5)<br>4. ECO325H5/325H1; ECO326H5/326H1<br>5. ECO327Y5*/327Y1*<br>6. ECO358H5/358H1; ECO359H5/359H1<br>7. 5 additional 300+ ECO courses or their equivalent of which at least 1.5 courses must be chosen from ECO349H5/329H1, 460H5, 461H5/461H1, 462H1, 463H5<br>8. Students are strongly advised to take ENG100Y5 before completing 15.0 courses.<br><br>* MAT222H5/223H1/248Y5 is strongly recommended as preparation for ECO327Y. Students taking one of these courses can have that course count in lieu of one half or a full 300+ ECO credit required for the program. |

## ***4. Ecology and Evolution − Specialist***

Program Description and Rationale

The new Ecology and Evolution Specialist Program represents a merging of two current Biology programs; the Ecology Specialist Program and the Biodiversity and Evolutionary Biology Specialist Program. Both of these programs have low enrolment. Part of the motivation for creating a new combined specialist was to reduce overlap and redundancy of existing programs. However, it also reflects the contemporary view of ecology as a multidisciplinary science firmly grounded in evolutionary principles. The new specialist program provides students with a strong foundation in evolutionary biology, organismal biology and ecology, while allowing for some flexibility in overlap with other disciplines and techniques (e.g. molecular biology, geography, quantitative sciences, etc.). This program is also more aligned with the broad academic expertise of the faculty within Biology and allows for overlap with faculty and courses outside Biology, such as in Geography. There are no resource implications for running this program since we are using courses currently taught within Biology. This new program will attract more students than the previous two programs since it is a contemporary view of ecology as an interdisciplinary science. Given the interdisciplinary nature of this program we expect it will be a more popular choice for students than the programs which are being deleted.

Within an Honours degree, 13.5 full course equivalents are required, including at least 5.0 at 300/400 level, of which 1.0 full course must be at the 400 level.

The educational outcomes of the Ecology and Evolution Specialist will be:

- to provide students with a solid grounding in the evolutionary principles underpinning contemporary ecology;
- to provide students with a knowledge base that encompasses other areas of biology interfacing with ecology and evolutionary biology;
- to train students in the scientific method (formulation of hypotheses, experimental design);

- to cultivate in students the ability to integrate, evaluate and critically assess ideas presented in scientific literature;
- to provide direct experience in various methodologies employed by ecologists and evolutionary biologists (specifically in the form of lab and field courses);
- to develop quantitative skills and problem-solving abilities;
- to develop research skills that will permit our graduates to successfully pursue further studies in ecology and evolutionary biology.

**Limited enrolment:** Enrolment is limited to students who have completed 4.0 credits (including BIO152H5 and BIO153H5) with a cumulative grade point average of 2.50.

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| First year: | 1. BIO152H5, 153H5; CHM140Y5; MAT132Y5/134Y5/135Y5/137Y5/138Y5<br>2. 1.0 credit from the following: CLA201H5, CSC108H5, 148H5; ENV100Y5; ERS120H5; PHY135Y5/PSY137Y5; WRI203H5, 307H5 |
| Second year: | BIO204H5, 205H5, 206H5, 207H5 |
| Third and Fourth years: | 1. BIO313H5<br>2. BIO360H5<br>3. 1.0 credit from courses in organismal biology: BIO319H5, 325H5, 334H5/338H5, 335H5, 354H5, 356H5, 370Y5<br>4. 0.5 credit from field courses: BIO301H5, 302H5*, 316H5, 317H5*, other OUPFB** Field Courses (P.I.)<br>5. 2.5 credits from core ecology/evolutionary biology courses: BIO330H5, 337H5, 339H5, 341H5, 361H5, 332Y5*, 406H5, 442H5, 443H5, 464H5, JBG312H5<br>6. 1.5 credits from other biology courses: BIO215H5, 309H5, 310H5, 312H5, 318Y5, 371H5, 372H5, 407H5, 410H5, 434H5, 481Y5<br>7. 1.0 credit from related courses from other departments: BIO314H5; MAT212H5, 222H5, 232H5; STA302H5, 322H5; GGR278H5 (formerly GGR261), GGR305H5/309H5/311H5, or from courses listed in #4, #5 and #6<br><br>*Offered in alternate years<br>**Ontario Universities Program in Field Biology |

## ***5. Behaviour, Genetics, and Neurobiology (Science) − Specialist***

Program Description and Rationale

This program replaces the Animal Behaviour Program. It is an interdisciplinary program that considers physiological and genetic contributions to behaviour. This integrative approach to the study of behaviour is an emerging discipline and brings together the tremendous gains in knowledge in neuroscience. Students taking this program will graduate with a knowledge base that will prepare them for graduate studies in a broad range of multidisciplinary fields in behavioral neuroscience and genetics. In this era of the genome, these students will be able to learn about the cutting edge concepts and technologies.

We will be drawing students from the Psychology pool (the science discipline with the highest enrollments at UTM) as well as from the Department of Biology (also a popular discipline). Given the nature of this program we expect it will be a popular choice for students with interdisciplinary interests. We expect that

the program will have a very beneficial effect on the delivery of Science at UTM, as it will encourage interaction between two major Science departments. The Program was developed as an interdisciplinary program between the Departments of Psychology and Biology, with equal involvement by the Chairs and the faculty of the two departments.

The program consists of a combination of lecture and laboratory courses as appropriate and consistent with the complimentary approaches in the two departments. All students will be required to take small seminars to discuss issues in depth as well as laboratory courses from years 2 to 4. In addition, a research thesis or project requirement will ensure that the student receives adequate research experience.

As in all our lecture, seminar, and lab courses within the Psychology and Biology programs, students in this interdisciplinary program are graded on the basis of a combination of 1) tests and quizzes; 2) papers; 3) in-class participation; and 4) research performance. Most of the courses have been or are being offered in the two departments. The proposed program will be organized such that students receive a complete education in the areas of Behavior, Genetics, and Neurobiology. There will be approximately 8 Psychology faculty and 8-10 Biology faculty who will be teaching in this program. Most of the faculty are at the Associate or Full Professor level with very active and productive research programs; three are at the Assistant Professor level.

Learning Outcomes

Students graduating with a specialist in Behaviour, Genetics, and Neurobiology will receive extensive training in basic science and in doing research and scholarly work in the areas of behavior-genetics- and evolution in combination with behavioral neuroscience. The innovative program will provide students with the knowledge base, conceptual understanding and specific research skills associated with this new and exciting interdisciplinary area- in this decade of the genome. In more general terms, the program will:

- help students to reason inductively and deductively, to analyze and to synthesize, and to think through moral and ethical issue
- help students to communicate clearly, substantively, and persuasively both orally and in writing
- permit students not only to answer questions through research and analysis but to exercise judgment about which questions are worth asking
- help students to become knowledgeable about and committed to standards of intellectual honesty and use of information
- train students to learn how to authenticate information, whether it comes from print sources or through new technologies
- encourage collaborations with others from different disciplines in the recognition that multidisciplinary approaches are necessary to address the major issues facing society; and
- facilitate understanding the methods of scientific inquiry; that is, scientifically literate

With this training Specialists will be in an excellent position to do post-graduate work in many areas of Biology, Psychology, Genetics, Physiology, or the Neurosciences. Some may go into Science education or opt to receive further clinical training in the Health Professions and/or Medical School. Those not choosing extensive post-graduate or clinical training will be equipped to work in industry, especially in Biotechnology or in Pharmaceutical settings, or to become Science writers.

Program Requirements

Within an Honours degree, 11.5 FCE are required, including at least 3.0 300/400 level credits and 1.0 400 level credits.

**Limited enrolment:** Enrolment is limited to students who have:

1. 4.0 completed credits;
2. grade of at least 77% in PSY100Y5;
3. average grade of at least 70% in BIO152H5 and BIO153H5;
4. a minimum CGPA of 2.50; and
5. successful completion of CHM140Y5 and MAT132Y5/134Y5/135Y5/137Y5/138Y5

Meeting minimum requirements does not guarantee admission.

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| First Year | PSY100Y5; BIO152H5; BIO153H5; CHM140Y5; MAT132Y5/134Y5/135Y5/ 137Y5/138Y5 |
| Second Year | 1. (PSY201H5, 202H5)/(BIO360H5, 361H)<br>2. BIO205H5; BIO206H5; BIO207H5; PSY252H5; PSY290H5<br><br>*Second year notes:*<br>▪ BIO204H5 (Introduction to Physiology) is required for the courses in the Neurobiology stream<br>▪ BIO215H5 (Laboratory in Molecular Biology and Genetics) is required for several courses in the Genetics stream<br>▪ PSY210H5 (Introduction to Developmental Psychology) is required for several courses in the Behavioural stream<br><br>Students are encouraged to consider taking these courses depending on their planned course of study. |
| Third Year | *1.0 FCE from each of the following three streams:*<br>1. Behaviour: BIO318H5/328H5, PSY316H5, PSY318H5, PSY346H5, PSY351H5, PSY353H5, PSY355H5, PSY357H5, PSY360H5, PSY362H5, PSY385H5, PSY393H5, PSY395H5, PSY397H5, PSY398H5, PSY399H5<br>2. Genetics: BIO314H5, BIO315H5, BIO341H5, BIO372H5, BIO407H5, PSY355H5<br>3. Neurobiology: BIO304H5, BIO309H5, BIO310H5, BIO403H5, PSY318H5, PSY346H5, PSY385H5, PSY393H5, PSY397H5, PSY399H5 |
| Fourth Year | 1. one seminar from the following: BIO406H5, BIO407H5, BIO478H5, PSY490H5, PSY495H5<br>2. one thesis/research project from the following: BIO481Y5, PSY400Y5, PSY403H5/404H5/405H5/406H5 |

## *6. Biomedical Communications (Science) − Minor*

This new interdisciplinary Minor bridges the fields of visualization, science, communication and technology. The Minor will promote exciting opportunities for UTM science students, especially in biology and anthropology. The Minor reflects a new unique strength at UTM as the biomedical communications program is the only program of its kind in Canada and therefore the minor will be unique in Canada. Through an understanding of theories of visual and written communication, students will prepare health/medical/scientific communication material for the digital age by learning to develop visual and written instruments targeted to specific populations.

Undergraduate science students often have trouble presenting their work visually and verbally. An asset would be for these students to have the tools necessary to visually record what they are studying. Presently there are no courses that give UTM science students instruction in visual communication. The HSC courses in the new Minor will undoubtedly provide students with useful tools to complement their existing studies and enhance their career possibilities as teachers and communicators. The Minor will also prepare students for continued studies in the Master of Science in Biomedical Communications program.

It is expected that the minor will be highly sought after by science students as it will give them a competitive edge over science graduates from other universities. The Departments of Biology and Anthropology will benefit, as their students will study how to visually record their subject matter with the goal of enhancing learning.

Linda Wilson-Pauwels, BMC Director, met numerous times with Angela Lange (Acting Director Biology, UTM) and Berry Smith (Director of Human Biology, St. George campus). Both were very enthusiastic about the new minor that will be offered at UTM. A similar Minor on the St. George campus was discussed, however, it was decided that for now, the Minor in BMC will only be offered at UTM. The Minor will also complement the planned growth in medicine at UTM and it will respond to the growing need in Canada for health and medical education.

Full- and part-time BMC graduate faculty will teach all HSC courses in the Minor. Faculty are experienced biomedical communicators. Course content has both theoretical and applied components. Course evaluations will be based on written essays or multiple and short-answer exams as well as applied assignments.

**The educational outcomes of the Biomedical Communications Minor will be to:**

- enhance an understanding of the underlying principles at the interface of biology and biomedical communications;
- use the principles of biomedical communications to visually convey biological material and concepts;
- understand and be able to use technology to convey scientific concepts;
- communicate scientific information visually and verbally to a variety of target audiences;
- understand the role of members of an interdisciplinary team of visual communicators and scientists when creating educational material; and
- appreciate the need for lifelong learning in the communication field.

Program Requirements

Enrolment in the program requires concurrent enrolment in a science major/specialist undergraduate program.

4.0 credits are required including:
3.0 credits from HSC300H5, 301H5, 302H5, 400H5, 402H5, 403H5, 404H5, or P.I. (See the CCIT/HSC Specialization for a description of the HSC courses)
1.0 credits from BIO152H5, 153H5, or ANT101H5, 102H5

## *7. Canadian Studies – Minor Program*

Program Description and Rationale

UTM is revising its program in Canadian Studies by eliminating the Specialist and introducing a Minor in this area. The specialist program currently has only 4 students enrolled and has never had high numbers. This change will also put the emphasis where it should be, on the Major program, for which there is much more demand and potential for development. The whole Canadian Studies program at UTM is simultaneously being revived and strengthened, primarily by revising the program requirements, assembling a list of the many UTM courses in the field that might be taken to complete the program, and raising its profile with increased publicity. For obvious reasons, courses in Canadian topics are popular with students planning to do a B.Ed., and our expanded Canadian Studies program will offer a wide range of choices in the field. For this reason, we anticipate that once students know that the program has been revised to include a Minor, demand for both it and the Major will increase substantially.

In preparing to make these changes the Chair of English and Drama (where the program is based) met with the chairs of participating UTM departments to discuss how the program might be made more meaningful and successful. Before the changes were submitted for official approval, they were circulated to all interested parties, none of whom had criticisms or suggestions. Indeed, everyone involved is very enthusiastic about the potential for success of the revised program.

As in the case of the current major and specialist programs, the Canadian Studies minor will draw from courses in Anthropology, Commerce, Economics, English, Fine Art, French, Geography, History, Philosophy, Political Science, Religious Studies, and Sociology. The program advisor has already prepared a brochure and set up a website to make students aware of the possibilities of study in this area and of the many courses that comprise the program. The advisor will participate in future student recruitment events in order to promote the program. There are no resource implications for this proposal.

Learning Outcomes

Students should leave the program:

- knowing about several different fields of study and with an awareness of how they are interrelated
- understanding how a distinct Canadian society and culture evolved
- with an appreciation of the different elements that constitute Canada as a political and social entity today
- able to discuss and explain more than one facet of Canadian culture and society
- able and eager to communicate what has been learned in the program to that same culture and society outside the university

- equipped to take what has been learned and use it to succeed in the Canadian workplace both economically and more broadly by applying the knowledge acquired to everyday life

Program Requirements: (for minor)

4.0 credits are required, fulfilling the following requirements:

1) 2.0 credits from the following list: HIS262H5, HIS263H5; POL214Y5; ENG216Y/ENG252Y; FRE300H5/FRE301H5; GGR202H5 and
2) 2.0 additional credits (at least 1.0 of which must be at the 300/400 level) in courses chosen from the list above or approved by the program advisor.

Note: the list of courses referred to in 2 will be on the program website and in the program brochure.

## 2. Deleted Programs:

UTM is proposing the elimination of 4 specialist programs:

i) **Biodiversity and Evolutionary Biology program and the Ecology Program.:** replaced by new program in Ecology and Evolution
ii) **Animal Behaviour**; replaced by new program in Behaviour, Genetics, and Neurobiology
iii) **Canadian Studies specialist**