



Faculty of Arts and Science

OFFICE OF THE FACULTY REGISTRAR

UNIVERSITY OF TORONTO

100 St George Street, Toronto, Ontario M5S 3G3

Memorandum

Date: December 17, 2004

To: Helen Lasthiotakis, Director, Policy and Planning

From: George Altmeyer, Faculty Secretary, Faculty of Arts and Science *GA*

Re: Major Calendar Changes for 2005-06

As required by policy, I am submitting on behalf of the Faculty of Arts and Science, a summary of major additions and deletions to the Faculty's programs for the 2005-06 academic year.

I note that there are no additional resource requirements for the new programs listed herein.

The program additions and deletions were vetted by the Faculty's Humanities, Social Sciences, and Sciences Curriculum Committees at their meetings of November 9, 10, 11 and 17, 2004 respectively and by the Faculty's Academic Standards Committee on December 15, 2004.

A. New Programs

1.0 History and Philosophy of Science and Technology Major

Requirements: Enrolment into this program is limited to students with a 3.0 GPA.

7 full courses or their equivalent.

1. One course in science, subject to UG coordinator approval. This course must include a laboratory or practical component, **HIS109Y** The Development of the European Civilization, 1350-1945
2. **HPS210H** Scientific Revolutions I, **HPS211H** Scientific Revolutions II, **HPS201** Origins of Western Technology or **HPS202H** Technology in the Modern World, **HPS250H** Introductory Philosophy of Science, **HPS350H** Revolution in Science (5 half courses)
3. One additional course at **HPS300+** level
4. One 200+H science half course; 300+ science half course; **HIS200+** series half course/**CLA203H1** Science in Antiquity/**CLA206H1** Ancient Astronomy

Recommended Preparation: **HPS100H1** and **VIC170Y1** Introduction to the Rhetoric of Science: Probability and Persuasion /**VIC171Y1** Methodology, Theory and Ethics in the Life Sciences. It is further recommended that the first HPS courses taken in the major be **HPS210H1** Scientific Revolutions I and **HPS211H1** Scientific Revolutions II.

Academic Relevance: The new major will replace all current IHPST POSTs. In conformity with its name, its current “Stepping Up” plan, and the aspiration of the Faculty of Arts and Science for IHPST, it has undergone a transformation to a genuine History and Philosophy of Science and Technology unit. For most of its existence, it has been largely a history of science unit. With the addition of 2.5 FTE faculty in philosophy of science, IHPST can now provide an integrated, interdisciplinary program similar to the leading international HPS programs in other universities (e.g. Cambridge, Indiana, Leeds, Pittsburgh). Although the program requires the maximum number of courses required for a major (8), it does so because meaningful study of the history and philosophy of science requires university-level knowledge of a science and of history and philosophy. Hence, the requirements are broad in scope, covering at least three disciplines.

Estimated Enrolment: 20

2.0 Department of Slavic Languages and Literature: Russian Literature in Translation Minor

Requirements:

Four full courses or their equivalent, including on 300+ series course.

1. **SLA240H1** Shaping Modern Consciousness: 19th Century Russian Prose and **241H1** The Great Age of Russian Prose Fiction II
2. **SLA339H1** 20th Century Russian Prose I: Modernism, Avant-garde, Totalitarianism and **340H1** 20th Century Russian Prose II: Internal and External Exile
3. Two additional approved full-course equivalents in Russian literature and/or culture.

Academic Relevance: The number of students studying Russian literature in translation has increased in the past few years. The minor program is designed to accommodate them.

Estimated Enrolment: 10

3.0 Aboriginal Studies Specialist

Requirements:

(10 full courses or their equivalents, including at least one 400-series course)

1. ABS 201Y1 Introduction to Aboriginal Studies
2. ABS 210Y1 Introduction to the Ojibwa Language /220Y1 Introduction to the Iroquoian Language/ (230H1 Introduction to Inuktitut and 232H1 Elementary Inuktitut)
3. ABS 300Y1 Worldview, Indigenous Knowledge, and Oral Tradition and ABS 301Y1 Native Language and Culture
4. ABS 460Y1 Methodology in Aboriginal Studies
5. Four additional full-course equivalents from Group A below (note: some of these courses have prerequisites)
6. One additional full-course equivalent from Group A or one full-course equivalent from Group B below (note: some of these courses have prerequisites)

[ABS 201Y is the gateway course for ABS]

Group A:

ABS210Y1	Introduction to the Ojibwa Language
ABS220Y1	Introduction to an Iroquoian Language
ABS230H1	Introduction to Inuktitut
ABS231H1	Elementary Inuktitut
ABS250H1	Indigenous Environmental Knowledge
ABS302H1	Aboriginal People in the Mass Media
ABS310Y1	Ojibwa Language II
ABS320Y1	Aboriginal Craft: Technical and Theoretical Aspects
ABS330Y1	Aboriginal Music: Technical and Theoretical Aspects
ABS331H1	Aboriginal Music
ABS341H1	Indigenous Theatre
ABS350Y1	Aboriginal Health Systems
ABS351H1	Aboriginal Legends and Teaching
ABS352H1	The Indian Act
ABS402H1	Traditional Indigenous Ecological Knowledge
ABS403H1	Aboriginal People in Urban Areas
ABS404H1	Politics of Aboriginal Nursing
ABS405Y1	Indigenous Thought and Expression: Creative Non-fiction
ABS460Y1	Methodology in Aboriginal Studies
ABS495Y1/ 496H1/497H1	Independent Research (for Major Program students only)
ANT315H1	Arctic Archaeology
ANT365Y1	Native America and the State
ANT453H1	Sub-Arctic Issues
ENG254Y1	Contemporary Native North American Literature
FRE434H1	Native Authors in Quebec
HIS369Y1	The Aboriginal Peoples of the Great Lakes
HIS472H1	Topics in Canadian Aboriginal/Non--Aboriginal Relations
HIS493H1	Cultural Encounters in Early Canada
JAG321H1	Aboriginal People and Environmental Issues in Canada
JFP450H1	First Nations Issues in Health and Healing (offered by the Faculty of Pharmacy)
RLG201Y1	Aboriginal Religion

UNI317Y1/317H1	Politics of Aboriginal Self-Government
UNI430H1	Senior Seminar: Special Topics in Canadian Studies
Group B:	
ANT200Y1	Introduction to Prehistoric Archaeology
ANT204Y1	Social and Cultural Anthropology
ANT310Y1	Archaeology of North America
ANT311Y1	Archaeological Fieldwork
ANT367Y1	Indigenous Spirituality
ANT348Y1	Anthropology of Health
ANT410H1	Hunter-Gatherers Past and Present
DRM268H1	Canadian Theatre History
ENV236Y1	Human Interactions with the Environment
FOR200H1	Conservation of Canada's Forests
GGR240Y1	Historical Geography of the Americas
HIS106Y1	Natives, Settlers, and Conquistadors: Colonizing the Americas, 1492-1776
HIS294Y1	Caribbean History and Culture
HIS384H1	Colonial Canada: The East
HIS358H1	How the West was Colonized
HIS402Y	Indigenous Colonial Cultures in the Spanish and Portuguese Americas
HIS468H1	Atlantic Canada
HIS478Y1	Immigration and Ethnicity in American History
INI327Y1	Race and Representation
JAL253H1	Language and Society
JAL254H1	Sociolinguistics
JIE222Y1	The Study of Environment
NEW224Y1	Caribbean Thought I
NEW240Y1	Introduction to Equity Studies
NEW324Y1	Caribbean Thought II
NEW369Y1	Studies in Post-Colonialism
POL217H1	Freedom: An Introduction to Political Theory
POL304Y1	Ethnicity and Politics in Canada
SOC220Y1	Social Inequality in Canada

Academic Relevance:

Each year, several students request a specialist program in Aboriginal Studies. The department did not feel that it was possible to have such a program until we had some continuing faculty in Aboriginal Studies, and could offer a course in methodology. We now have some continuing faculty and a promise of an additional faculty member, through the Stepping Up process, and we are ready to offer the course in methodology. Thus, it is now an appropriate time to introduce such a program.

Aboriginal Studies is a burgeoning area in universities around the world. Within Canada, it is a faculty in some universities, with its own dean, a department at others, and a program in others. There is a critical mass of material that must be covered. Over the years, Aboriginal research methodologies have become more defined. There are now graduate programs at both the Masters and Doctoral level in Aboriginal studies. The existence of a specialist program will allow for a greater depth of study in the area. In the program review done in the spring of 2004, both members of the Aboriginal Studies Program and the Review Committee stated the need for greater depth in offerings. In 2004-2005, the depth has been increased. While this is an ongoing process, nevertheless it is important that students be able to pursue this depth, and a specialist program will allow for this. In fact, several students have completed the number of courses that would be required for a specialist, but have been unable to get credit for a specialist because the Program has not had one.

As far as the department can tell, other universities with Aboriginal studies programs have the equivalent of a specialist program (these programs are often called majors, but seem to have at least ten full course equivalents required). While the University of Toronto does not yet offer as wide a range of courses as are offered by many of these other programs, the creation of a specialist would make the program more similar

to those offered at other universities. The existence of a specialist would also be an excellent recruitment tool for Aboriginal students, according to Jonathan Hamilton-Diabo, Director of First Nations House.

In the recent review of the Aboriginal Studies Program, the Review Committee remarked that the existence of a viable ABS program must be felt throughout the University of Toronto: 'It has to pierce the culture of the university if it is to be accepted and embraced; it cannot be built on goodwill alone.' The introduction of a specialist is a step towards raising the profile of the program within the Faculty and, perhaps, the University.

Estimated Enrolment: 5 – 10

4.0 Department of Biochemistry: Bioinformatics and Computational Biology Specialist

If we were to choose the single most important scientific advance of the last century, it would be iconified in the image of the double helix of DNA and its implied duality: life propagates as pure information, which is encoded in physical molecules. Molecular biology is an information science as much as it is a physical science. Bioinformatics devises methods to make biological information computable - to abstract properties of molecules, cellular systems and biological organisms, to efficiently store and retrieve the very large volumes of data that are being accumulated, to support sensitive comparisons and to mine the data with sophisticated statistical tools. Computational biology is bioinformatics' goal: to advance our understanding of life through computational analysis, modelling, and prediction. However, integrating the two cultures of computer science and life science has been a challenge, and a bottleneck for progress has emerged from a lack of dually qualified researchers.

The Bioinformatics and Computational Biology specialist program is designed to provide a balance between its foundational subjects and to cover advanced topics in both the theoretical and the life-sciences. It aims to train the generalist, who will become creative at the intersection of two fields, rather than pursue their sub specialization. The program draws on the University's state-of-the-art facilities across several departments, as well as being firmly embedded in a comprehensive landscape of graduate and postgraduate research in one of the University's priority areas. Graduates of the program would typically pursue graduate studies in any of the participating departments: Computer Science (from the bio computing stream, see below), Biochemistry, Botany or Zoology (from the bio analyst stream). Important advances in the computer sciences have been motivated by these needs and there is virtually no field in the life-sciences and in molecular medicine that does not critically depend on insightful data analysis.

Requirements:

The Bioinformatics and Computational Biology Program is jointly sponsored by the Departments of Biochemistry, Botany, Computer Science and Zoology. Enrollment is limited and selection is based on performance in the required First year courses
17 full courses or their equivalent

First Year: **MAT135Y1** Calculus I/ **MAT137Y1** Calculus II/
MAT157Y1 Analysis I; **CSC107H1** Self-paced Introduction to
Computer Programming/ **CSC108H1** Introduction to Computer
Programming; **CSC148H1** Introduction to Computer Science/
CSC150H1 Accelerated Introduction to Computer Science;
CSC165H1 Mathematical Expression and Reasoning for Computer
Science; **CHM151Y1** Chemistry: The Molecular Science/
(**CHM138H1** Introduction to Organic Chemistry I, **CHM139H1**
Chemistry: Physical Principles); **BIO150Y1** Organisms in their
Environment

Second Year: **MAT223H1** Linear Algebra I/ **MAT240H1** Algebra I;
STA247H1 Probability with Computer Applications; **STA248H1**
Statistics for Computer Scientists; **CSC207H1** Software Design;
CSC236H1 Introduction to the Theory of Computation/ **CSC240H1**

Enriched Introduction to the Theory of Computation; **BCH242Y1**
Biochemistry; **BIO250Y1** Cell and Molecular Biology

Third Year: **CSC 263H1** Data Structures and Analysis/ **CSC 265H1**
Enriched Data Structures and Analysis; **CSC 321H1** Introduction to
Neural Networks and Machine Learning/ **CSC 343H1** Introduction to
Databases; **CSC 373H1** Algorithm Design and Analysis/ **CSC 375H1**
Enriched Algorithm Design and Analysis; **BCH 441H1** Bioinformatics/
BIO 472H1 Computational Genomics and Bioinformatics; **MGY**
311Y1 Molecular Biology/ (**BIO 260H1** Concepts in Biology, **BIO**
349H1 Eukaryotic Molecular Biology)

Fourth Year:

Bio Analyst Stream (preparation for life-science graduate programs):
BCB 410H1 Applied Bioinformatics; **BCB 420H1** Computational
Systems Biology; **CSC 411H1** Machine Learning and Data Mining;
five half credits from (**BCB 430Y1** Special Project in Bioinformatics
and Computational Biology, **BCH 335H1** Nucleic Acids and
Recombinant DNA Technology, **BCH 340H1** Proteins: from Structures
to Proteomics, **MGY 420H1** Regulation of Gene Expression, **MGY**
425H1 Signal Transduction and Cell Cycle Regulation, **MGY 428H1**
Microbial Genomics, **BCH 422H1** Cell Surface Biochemistry,
BCH426H1 Signals Regulating Metabolic Pathways, **BCH 440H1**
Protein Biosynthesis, **MGY 460H1** Plant Molecular Genetics, **BIO**
460H1 Molecular Evolution, **BIO 473H1** Chemical Genomics, **BOT**
421H1 Plant Cell Metabolism, **BOT 450H1** Plant Proteomics and
Metabolomics, **BOT 458H1** Plant Molecular Biology and
Biotechnology)

Bio Computing Stream (preparation for computer-science graduate
programs): **BCB 410H1** Applied Bioinformatics; **BCB 420H1**
Computational Systems Biology; **CSC 411H1** Machine Learning and
Data Mining; **CSC 336H1** Numerical Methods/ **CSC 350H1** Numerical
Algebra and Optimization; one half credit from (**BCB 430Y1** Special
Project in Bioinformatics and Computational Biology, **MGY 420H1**
Regulation of Gene Expression, **MGY 425H1** Signal Transduction and
Cell Cycle Regulation, **MGY 428H1** Microbial Genomics, **BCH**
422H1 Cell Surface Biochemistry, **BCH426H1** Signals Regulating
Metabolic Pathways, **BCH 440H1** Protein Biosynthesis, **MGY 460H1**
Plant Molecular Genetics, **BIO 460H1** Molecular Evolution , **BIO**
473H1 Chemical Genomics, **BOT 421H1** Plant Cell Metabolism ,
BOT 450H1 Plant Proteomics and Metabolomics , **BOT 458H1** Plant
Molecular Biology and Biotechnology); three half credits from (**BCB**
430Y1 Special Project in Bioinformatics and Computational Biology,
CSC 324H1 Principles of Programming Languages, **CSC 363H1**
Computational Complexity and Computability, **MAT 244H1**
Introduction to Ordinary Differential Equations, **CSC 310H1**
Information Theory, **CSC 321H1** Introduction to Neural Networks and
Machine Learning, **CSC 343H1** Introduction to Databases, **CSC**
412H1 Uncertainty and Learning in Artificial Intelligence, **CSC 456H1**
High-Performance Scientific Computing)

Academic Relevance:

It is now widely recognized that the bottleneck of post-genomic science is to extract information from the genome-scale volumes of primary data and transform it into knowledge. State-of-the-art computational

methods are needed that are relevant for biology and guided by a confident understanding of the molecular and cellular context. Bioinformatics is the primary method of this endeavour and Computational Biology is its goal. Unfortunately, the path to this goal has been rich with frustrations. Life science researchers appear to have often hoped that explanatory patterns will automatically become obvious, once enough data is available. Computer scientists appear to have expected the life-science domain to be able to define problems in computational terms, obviating reference to the subtleties of biology. Both expectations are baseless. They are representative of a cultural gap between life- and computer sciences that has frequently been underestimated.

Industry professionals see three major categories of needs: biological analysts who are involved in experimental work and trained in bioinformatics applications, software engineers with enough domain knowledge to be able to support method and database integration, and the true generalist with enough skills in both areas to develop new methods and strategies. It is the rare, latter individual who is also most highly sought in the academic sector and is not supplied to the job market through sub specialization of the traditional disciplines.

We believe that the true potential of computational biology can only be unlocked in advanced transdisciplinary approaches, designed with a commitment to the highest scientific standards in both the theoretical, as well as the experimental domain. We need to attract and train students who have the intellectual potential to contribute to the scientific discourse of both disciplines and who will thrive on the challenge to acquire their concepts and methods. We need a culture within the theoretical and experimental disciplines that recognizes the value of Computational Biology as a science in its own right and contributes to its growth and success. And we need to document our commitment through the creation of a dedicated program that draws from its foundation disciplines, integrates the most relevant contents and develops specialized material at their intersection.

The Bioinformatics and Computational Biology Program has been designed to balance the requirements of its foundational disciplines while providing a challenging academic course of studies that covers advanced topics in both the theoretical and the life-sciences. It leverages the strengths of many departments across our campus towards a program that has the potential for a clear leadership role in North America. And it interfaces on many levels with graduate and post-graduate initiatives on campus, to provide a coherent career path, from entry into the University to advanced postdoctoral studies.

Estimated Enrolment: 20

5.0 Department of Biochemistry: Biochemistry Major

Requirements:

The Biochemistry Major program is a Type 3 program. Only students with a GPA of 2.5 or higher will be considered for entrance into the Major program. Enrollment is limited and selection is based upon performance in the three First Year required courses. Students may combine this Biochemistry Major with another suitable Major within Science, Humanities, or Social Sciences.

First Year: **BIO 150Y1** Organisms in their Environment; **CHM 151Y1** Chemistry: the Molecular Science/ (**CHM 138H1** Introductory Organic Chemistry I, **139H1** Chemistry: Physical Principles); **MAT 135Y1** Calculus I/**136Y1** Calculus and its Foundations/**137Y1** Calculus!

Second Year: **BCH 210H1** Introductory Biochemistry; **BIO 250Y1** Cell and Molecular Biology; **CHM 247H1** Introductory Organic Chemistry II

Third Year:

1. **BCH 370H1** Laboratory Courses in Biochemical Techniques
2. **PSL 350H1** Mammalian Molecular Biology/**BIO 349H1** Eukaryotic Molecular Biology*
(*NOTE: **BIO 349H1** has **BIO 260H1**/**HMB 265H1** as prerequisite)
3. One full-course equivalent from the following list:
Any 300-level course(s) in **BIO/ BOT/ CHM/ HMB/ IMM/ LMP/ MGY/ PCL/ PSL/ ZOO/ BIO260H1** Concepts in Genetics/ **CHM**

217H1 Introduction to Analytical Chemistry/**CHM** 220H Physical Chemistry for Life Sciences/**BCH** 304H1 Cell Dynamics & Interactions (departmental approval required)

Fourth Year: Two of: **BCH**422H1 Cell Surface Biochemistry/ 425H1 Structural Biology: Principles and Practice/ 426H1 Signals Regulating Metabolic Pathways/ 440H1 Protein Biosynthesis/ 441H1 Bioinformatics/ 445H1 / **CHM**447H1 Bio-organic Chemistry/**JBI** 428H1 Molecular Immunology* (*NOTE **JBI** 428H1 has **IMM** 334Y/335Y1 as prerequisite)

Academic Relevance:

Up until this time, the Department of Biochemistry has offered a Specialist Program as listed in the current calendar. We can only take 45-50 students into the Specialist Program largely because we have limited resources for training these students, especially in the 4th year advanced laboratory (BCH 471Y), which is a very high level practical lab experience. Thus, there are students we would like to train but who are unable to gain entry into the Specialist Program. We have a minimal GPA of 3.0 for entry into the Specialist, but in recent years this has crept up to 3.3-3.4 as the demand for the Program has increased. (We had over 120 applications for the 45-50 spots in the Specialist Program in 2004). We also have inquiries from students who wish to take a Major in Biochemistry that can be combined with another Science, Humanities or Social Sciences Major. Thus, there is a need for more training in Biochemistry as clearly shown by student demand. Not only would this Major allow students in Science added exposure to our discipline, it would, for example, allow an English Major to become a Major in Biochemistry and thus become familiar with the science, so that she or he could enter the field of scientific publishing, editing or writing. A student with a Major in Economics, combining this with a Major in Biochemistry, could be employed directing investment funds or portfolios dealing with biotech, drug and clinical medical supply firms.

From our viewpoint the creation of a Biochemistry Major would allow another 50 students to be trained in Biochemistry. Further, students in the Major, who did very well in their second year, could transfer into the Specialist Program for their third. We do encounter some attrition in the Specialist Program in third and fourth years and the Major students could serve to boost the number of Specialists we graduate. The Biochemistry Major would thus be a parallel stream to the Specialist, with opportunities for Majors to become Specialists and indeed for Specialists to become Majors, as their academic instruction unfolds in upper years.

Another attractive feature is that no new courses need be created for the Biochemistry Major. We already have an introductory course BCH 210H that will serve as the foundation course for the Major Program. We have requested that Physiology allow our Major students access to their Molecular Biology Course PSL 350H, coordinated by Dr. Valerie Watt and this has been agreed to. The Majors will take BCH 370H, the introductory lab course, but this is already available to Life Science students and we do have space within BCH 370H to accommodate more students.

The pool of Life Science students is quite large and the various Specialist Programs provide space for a relatively small fraction of these. There is concern that the students in the more diverse programs such as Human Biology do not have all the opportunities they need to enter into an appropriate focussed life science discipline. A Biochemistry Major (along with other Majors planned in Life Science) will provide more opportunities for Life Science students and give them a department within Medicine that will serve both as a base and an academic home. The Biochemistry Majors will be our students, just as the Specialists in Biochemistry are our responsibility, and we will provide our Majors the same access to counselling, information nights, research opportunities and extracurricular events as the Specialists have. In effect we are asking to double the size of our academic family and we see the Major as a positive initiative on our part.

Estimated Enrolment: 50

6.0 Computer Science – Artificial Intelligence Specialist

Requirements:

Consult Student Counsellor, Department of Computer Science.

Enrolment in this Program is limited. Admission requirements are the same as for the

Specialist program in Computer Science.

(13.5 full courses or their equivalent, including at least one 400-series course)

- One full course English Writing Requirement.
- All Basic Courses and Core Courses (9 full courses).
- One full credit from **MAT237Y1** Multivariable Calculus/ **257Y1** Analysis II, **MAT224H1** Linear Algebra II/ **240H1** Algebra I/ **247H1** Algebra II, **STA248H1** Statistics for Computer Science/ **261H1** Probability and Statistics II.
- Five half courses from the Artificial Intelligence area, with at least one half course from each of three different Artificial Intelligence sub-areas.

Notes:

- 1.0 Students may be interested in taking **JUP 250Y1** Introduction to Cognitive Science to satisfy their Writing Requirement. This course can be taken in first year.
- 2.0 The additional half course **CSC 320H1** Introduction to Visual Computing is recommended for students interested in taking **CSC 420H1** Introduction to Image Understanding.
- 3.0 The additional half course **CSC 330H1** Logical Specifications is recommended for students interested in taking **CSC 486H1** Knowledge Representation and Reasoning.

Note: Basic Courses, Core Courses and Additional Courses will be listed before all program descriptions in the calendar. They are:

Basic Courses (5.5 full courses)

First Year:

- **CSC 107H1** Self-Paced Intro to Computer Programming/**108H1** Intro to Computer Programming/**150H1** Accelerated Intro to Computer Programming [Software Engineering sub-area]
- **CSC 148H1** Introduction to Computer Science/**150H1** Accelerated Intro to Computer Programming [Software Engineering sub-area]
- **CSC 165H1** Mathematical Expression and Reasoning for Computer Science/**240H1** Enriched Intro to the Theory of Computation [Logic and Complexity sub-area]
- **MAT 137Y1** Calculus!/157Y1 Analysis I [Mathematics sub-area]

First or Second Year:

- **CSC 207H1** Software Design [Software Engineering sub-area]
- **CSC 236H1** Intro to the Theory of Computation [Logic and Complexity sub-area]
/ **240H1** Enriched Intro to the Theory of Computation [Core Systems sub-area]
- **CSC 258H1** Computer Organization
- **MAT 223H1** Linear Algebra II/**240H1** Algebra I [Mathematics sub-area]

Second Year:

- **CSC 263H1** Data Structures and Analysis [Logic and Complexity sub-area]
/ **265H1** Enriched Data Structures and Analysis
- **STA 247H1** Probability with Computer Applications/**257H1** Probability and Statistics I [Mathematics sub-area]

Notes:

1. Students with a strong background in Java or C++ may omit **CSC 107H1/108H1** and proceed

directly with **CSC 148H1/150H1**.

2. **CSC 150H1** is an accelerated alternative to **CSC 107H1/108H1** and **CSC 148H1**, intended for students with previous programming experience in a procedural language.
3. **CSC 240H1** is an accelerated alternative to **CSC 165H1** and **CSC 236H1**, intended for students with a strong mathematical background.

Core Courses (3.5 full courses)

- **CSC 209H1** Software Tools & Systems Programming [Core Systems sub-area]
- **CSC 324H1** Principals of Programming Languages [Software Engineering sub-area]
- **CSC 336H1** Numerical Methods/350H1 Numerical Algebra and Optimization [Numerical Analysis sub-area]
- **CSC 343H1** Introduction to Databases [Information Systems sub-area]
- **CSC 363H1** Computational Complexity & Computability/365H1 Enriched Computational Complexity and Computability [Logic and Complexity sub-area]
- **CSC 369H1** Operating Systems [Core Systems sub-area]
- **CSC 373H1** Algorithm Design & Analysis/375H1 Enriched Algorithm Design & Analysis [Logic and Complexity sub-area]

Notes

1. **CSC 350H1** is required in the Computer Science Specialist Program – Foundations Option; students who take **CSC 336H1** and later decide to enroll in the Foundations Option will be required to take extra credits as determined by the Undergraduate Associate Chair.
2. **MAT 237Y1/257Y1** is a direct or indirect prerequisite for a number of CSC courses. **MAT 237Y1/257Y1** is also required in most Computer Science programs. Students are advised to take **MAT 237Y1/257Y1** unless they have planned their program and course selection carefully and they are certain that they will not need it.

Additional Courses

Systems Area

- I. *Core Systems*
CSC 354H1 Discrete-Event Simulation & Modeling, **372H1** Microprocessor Software;
ECE 385H1
CSC 458H1 Computer Networks, **469H1** Operating Systems Designs, **488H1** Compilers and Interpreters; **ECE 489H1**
- II. *Software Engineering*
CSC 340H1 Information Systems Analysis and Design
CSC 407H1 Software Architecture and Design, **408H1** Software Engineering, **465H1** Formal Methods in Software Design
- III. *Information Systems*
CSC 309H1 Programming on the Web, **310H1** Information Theory
CSC 443H1 Database System Technology

Human Factors and Graphics Area

- I. *Human Factors*

CSC 300H1 Computers and Society, 318H1 The Design of Interactive Computational Media
CSC 428H1 Human-Computer Interaction, 454H1 The Business of Software

II. *Graphics*

CSC 320H1 Introduction to Visual Computing
CSC 418H1 Computer Graphics

Artificial Intelligence Area

I. *Reasoning*

CSC 384H1 Introduction to Artificial Intelligence
CSC 486H1 Knowledge Representation and Reasoning

II. *Language*

CSC 401H1 Natural Language Computing, 485H1 Computational Linguistics

III. *Vision*

CSC 420H1 Introduction to Image Understanding, 487H1 Computational Vision

IV. *Learning*

CSC 321H1 Introduction to Neural Networks and Machine Learning
CSC 411H1 Machine Learning and Data Mining, 412H1 Uncertainty and Learning in Artificial Intelligence

Foundations Area

I. *Logic and Complexity*

CSC 330H1 Logical Specifications
CSC 438H1 Computability and Logic, 448H1 Formal Languages and Automata

II. *Numerical Analysis*

CSC 351H1 Numerical Approximation, Integration and Ordinary Differential Equations
CSC 446H1 Computational Methods for Partial Differential Equations, 456H1 High-Performance Scientific Computing

III. *Mathematics*

MAT 224H1 Linear Algebra II/240H1 Algebra I, 237Y1 Multivariable Calculus/257Y1 Analysis II; STA 248H1 Statistics for Computer Scientists

Academic Relevance

This is a coherent program that takes advantage of our strong AI group and the extensive set of courses they already offer. We believe there is student demand for such a program, and we hope it will be useful in recruiting students as well.

Estimated Enrolment: 10

7.0 Computer Science Specialist

Requirements:

Consult Student Counsellor, Department of Computer Science.

Enrolment in this Program is limited. Admission requirements are the same as for the Specialist program in Computer Science.

(14 full courses or their equivalent, including at least one 400-series course)

- One full course English Writing Requirement.
- All Basic Courses and Core Courses (9 full courses), except that students must take CSC 350H1 rather than CSC 336H1.
- MAT 224H1/240H1, 237Y1/257Y1.

- MAT 301H1/302H1/315H1/334H1/344H1.
- CSC 351H1.
- CSC 438H1/448H1/465H1.
- Two half courses from the Additional Courses, with at least one 400-level half course – these may include any half course not taken to satisfy the requirement CSC 438H1/448H1/465H1.

Note: Basic Courses, Core Courses and Additional Courses will be listed before all program descriptions in the calendar. They are:

Basic Courses (5.5 full courses)

First Year:

- **CSC 107H1** Self-Paced Intro to Computer Programming/108H1 Intro to Computer Programming/150H1 Accelerated Intro to Computer Programming [Software Engineering sub-area]
- **CSC 148H1** Introduction to Computer Science/150H1 Accelerated Intro to Computer Programming [Software Engineering sub-area]
- **CSC 165H1** Mathematical Expression and Reasoning for Computer Science/240H1 Enriched Intro to the Theory of Computation [Logic and Complexity sub-area]
- **MAT 137Y1** Calculus!/157Y1 Analysis I [Mathematics sub-area]

First or Second Year:

- **CSC 207H1** Software Design [Software Engineering sub-area]
- **CSC 236H1** Intro to the Theory of Computation /240H1 Enriched Intro to the Theory of Computation [Logic and Complexity sub-area]
[Core Systems sub-area]
- **CSC 258H1** Computer Organization
- **MAT 223H1** Linear Algebra II/240H1 Algebra I [Mathematics sub-area]

Second Year:

- **CSC 263H1** Data Structures and Analysis /265H1 Enriched Data Structures and Analysis [Logic and Complexity sub-area]
- **STA 247H1** Probability with Computer Applications/257H1 Probability and Statistics I [Mathematics sub-area]

Notes:

1. Students with a strong background in Java or C++ may omit **CSC 107H1/108H1** and proceed directly with **CSC 148H1/150H1**.
2. **CSC 150H1** is an accelerated alternative to **CSC 107H1/108H1** and **CSC 148H1**, intended for students with previous programming experience in a procedural language.
3. **CSC 240H1** is an accelerated alternative to **CSC 165H1** and **CSC 236H1**, intended for students with a strong mathematical background.

Core Courses (3.5 full courses)

- **CSC 209H1** Software Tools & Systems Programming [Core Systems sub-area]
- **CSC 324H1** Principals of Programming Languages [Software Engineering sub-area]
- **CSC 336H1** Numerical Methods/350H1 [Numerical Analysis sub-area]

- Numerical Algebra and Optimization
- **CSC 343H1** Introduction to Databases [Information Systems sub-area]
- **CSC 363H1** Computational Complexity [Logic and Complexity sub-area]
& Computability/365H1 Enriched
Computational Complexity and Computability
- **CSC 369H1** Operating Systems [Core Systems sub-area]
- **CSC 373H1** Algorithm Design & Analysis/ [Logic and Complexity sub-area]
375H1 Enriched Algorithm Design & Analysis

Notes

1. **CSC 350H1** is required in the Computer Science Specialist Program – Foundations Option; students who take **CSC 336H1** and later decide to enroll in the Foundations Option will be required to take extra credits as determined by the Undergraduate Associate Chair.
2. **MAT 237Y1/257Y1** is a direct or indirect prerequisite for a number of CSC courses. **MAT 237Y1/257Y1** is also required in most Computer Science programs. Students are advised to take **MAT 237Y1/257Y1** unless they have planned their program and course selection carefully and they are certain that they will not need it.

Additional Courses

Systems Area

- I. *Core Systems*
CSC 354H1 Discrete-Event Simulation & Modeling, **372H1** Microprocessor Software;
ECE 385H1
CSC 458H1 Computer Networks, **469H1** Operating Systems Designs, **488H1** Compilers and Interpreters; **ECE 489H1**
- II. *Software Engineering*
CSC 340H1 Information Systems Analysis and Design
CSC 407H1 Software Architecture and Design, **408H1** Software Engineering, **465H1** Formal Methods in Software Design
- III. *Information Systems*
CSC 309H1 Programming on the Web, **310H1** Information Theory
CSC 443H1 Database System Technology

Human Factors and Graphics Area

- I. *Human Factors*
CSC 300H1 Computers and Society, **318H1** The Design of Interactive Computational Media
CSC 428H1 Human-Computer Interaction, **454H1** The Business of Software
- II. *Graphics*
CSC 320H1 Introduction to Visual Computing
CSC 418H1 Computer Graphics

Artificial Intelligence Area

- I. *Reasoning*
CSC 384H1 Introduction to Artificial Intelligence
CSC 486H1 Knowledge Representation and Reasoning
- II. *Language*
CSC 401H1 Natural Language Computing, **485H1** Computational Linguistics

III. *Vision*

CSC 420H1 Introduction to Image Understanding, 487H1 Computational Vision

IV. *Learning*

CSC 321H1 Introduction to Neural Networks and Machine Learning

CSC 411H1 Machine Learning and Data Mining, 412H1 Uncertainty and Learning in Artificial Intelligence

Foundations Area

I. *Logic and Complexity*

CSC 330H1 Logical Specifications

CSC 438H1 Computability and Logic, 448H1 Formal Languages and Automata

II. *Numerical Analysis*

CSC 351H1 Numerical Approximation, Integration and Ordinary Differential Equations

CSC 446H1 Computational Methods for Partial Differential Equations, 456H1 High-Performance Scientific Computing

III. *Mathematics*

MAT 224H1 Linear Algebra II/240H1 Algebra I, 237Y1 Multivariable Calculus/257Y1 Analysis II; STA 248H1 Statistics for Computer Scientists

Academic Relevance

This flexible program allows students to concentrate in one or more areas for which there is currently no program.

Estimated Enrolment: 50

8.0 Department of Pharmacology: Pharmacology Major

Requirements:

(8 full courses or their equivalent, including two 300 series courses and one 400 series course)
Enrollment in this Program is limited. Students may apply after completing 4 courses including all the First Year requirements with a minimum CGPA of 2.7.

First Year

BIO150Y Organisms in their Environment; (CHM138H Introductory Organic Chemistry I, 139H Chemistry: Physical Principles)/CHM151Y Chemistry: The Molecular Science

Second Year

BCH210H Introductory Biochemistry; BIO250Y Cell and Molecular Biology; PCL201H Intro to Pharmacology: Pharmacokinetic Principles; CHM217H Introduction to Analytical Chemistry/220H Physical Chemistry for Life Sciences (see NOTE 1); CHM247 Introductory Organic Chemistry II/249H Organic Chemistry

Third Year

PCL302H Intro to Pharmacology: Pharmacodynamic Principles; PSL302Y Human Physiology; BCH370H Laboratory Courses in Biochemical techniques/BIO349H Eukaryotic Molecular Biology (see NOTE 2)

Fourth Year

PCL470Y Systems Pharmacology

NOTES:

1. CHM220H requires MAT135Y/137Y/151Y as a prerequisite.

2. **BIO349H** requires **BIO260H/HMB265H** as a pre-requisite.
3. Students are not allowed to enroll concurrently in the Major Program in Pharmacology and Major Program in Toxicology.
4. Students are not allowed to enroll concurrently in the Major Program in Pharmacology and a Specialist Program in Toxicology.
5. Transfer from the Major Program in Pharmacology to the Specialist Program in Pharmacology may be requested at the end of the second year, providing that placements are available and the student has a minimum CGPA of 3.0.

Academic Relevance:

The creation of the new **Major Program in Pharmacology** is the response to (1) the need to accommodate the increasing number of qualified applicants, and (2) the lack of capabilities to further expand the enrollment in the Specialist programs beyond the current level.

1. In the last two to three years, the number of applicants to our Specialist programs has increased substantially. Two to three hundred students with a CGPA of 3.0, or higher, have applied to the Pharmacology specialist program, for a maximum of 40 placements. This raised the effective CGPA cut-off to 3.3.
2. It is also imperative to recognize the limited availability of departmental resources required for a further expansion of the specialist programs. This is particularly relevant due to (a) the limited capacity of the fourth year Pharmacology Laboratory course (PCL471Y), (b) the lack of capability to increase enrolment in the fourth year Research Project in Pharmacology (PCL472Y).

This **Major program in Pharmacology** provides undergraduate students with a broader range of options in Life Sciences, and the possibility to combine different and complementary areas of expertise. This approach contributes to a broader and multidisciplinary undergraduate training. Additionally, the major program in Pharmacology is also an adequate response to students seeking academically recognized knowledge in pharmacological sciences, and do not want to be fully committed to a demanding specialist program.

Estimated Enrolment: 40

9.0 Department of Pharmacology: Toxicology Major

Requirements:

(8 full courses or their equivalent, including two 300 series course and one 400 series course). Enrollment in this Program is limited. Students may apply after completing 4 courses including all the First Year requirements with a minimum CGPA of 2.7.

First Year

BIO150Y Organisms in their Environment; (**CHM138H** Introductory Organic Chemistry I, 139H Chemistry: Physical Principles)/**CHM151Y** Chemistry: The Molecular Science

Second Year

BCH210H Introductory Biochemistry; **BIO250Y** Cell and Molecular Biology; **PCL201H** Intro to Pharmacology: Pharmacokinetic Principles; **CHM217H** Introduction to Analytical Chemistry/220H Physical Chemistry for Life Sciences (see NOTE 1); **CHM247** Introductory Organic Chemistry II/249H Organic Chemistry

Third Year

PCL302H Intro to Pharmacology: Pharmacodynamic Principles; **PSL302Y** Human Physiology; **BCH370H** Laboratory Courses in Biochemical techniques/**BIO349H** Eukaryotic Molecular Biology (see NOTE 2)

Fourth Year

PCL473Y Interdisciplinary Toxicology (see NOTE 1)

NOTES:

1. **CHM220H** requires **MAT135Y/137Y/151Y** as a prerequisite.
2. Although **LMP301H** (Introduction to the Biochemistry of Human Disease) and **LMP363H** (Principles of Pathobiology) are not pre-requisites to enroll in **PCL473Y**, students are strongly recommended to enroll in at least one of these courses.
3. Students are not allowed to enroll concurrently in the Major Program in Toxicology and Major Program in Pharmacology.
4. Students are not allowed to enroll concurrently in the Major Program in Toxicology and a Specialist Program in Pharmacology.
5. Transfer from the Major Program in Toxicology to the Specialist Program in Toxicology may be requested at the end of the second year, providing that placements are available and the student has a minimum CGPA of 3.0.

Academic Relevance:

The creation of the new **Major Program in Toxicology** is the response to (1) the need to accommodate the increasing number of qualified applicants, and (2) the lack of capabilities to further expand the enrollment in the Specialist programs beyond the current level.

3. In the last two to three years, the large number of applicants applying to our Specialist program in Toxicology has increased substantially, which has led to an increase in the effective CGPA cut-off of 2.8-3.0, from the minimum required of 2.7, form a maximum of 60 placements.
4. The minimum CGPA requirement for the Major in Toxicology is 2.7, analogous to the one required for the Major in Pharmacology.
5. A minimum CGPA requirement of 3.0 for the Specialist Program in Toxicology becomes effective in the academic year of 2005-2006. This new CGPA requirement aligns the requirements for both the Specialist Program in Toxicology and the Specialist Program in Pharmacology. The Double Specialist Pharmacology/Toxicology Program requirement remains at 3.5.
6. It is also imperative to recognize the limited availability of departmental resources required for a further expansion of the specialist programs. This is particularly relevant due to the lack of capability to increase enrolment in the fourth year Research Project in Toxicology (PCL474Y).

This **Major program in Toxicology** provides undergraduate students with a broader range of options in Life Sciences, and the possibility to combine different and complementary areas of expertise. This approach contributes to a broader and multidisciplinary undergraduate training.

Additionally, the major program in Toxicology is also an adequate response to students seeking academically recognized knowledge in pharmacological sciences, and do not want to be fully committed to a demanding specialist program.

Estimated Enrolment: 40

10.0 Department of Physics: Physics & Philosophy Specialist

Requirements:

Consult the Undergraduate Coordinators of the Departments of Physics and Philosophy. 16.0 courses: 9.5 in Physics, as below. 6.5 courses in Philosophy, consisting

of HPS 250H, PHL 355H, PHL 356H, and 5 other PHL courses; 2.5 courses must be at the 300 level or above, and one half-course must be at the 400-level.

Required courses in Mathematics and Physics:

First year:

PHY140Y Foundations of Physics; **MAT137Y** Calculus I/157Y Analysis I; **MAT223H** Linear Algebra I

Second year:

MAT237Y Multivariable Calculus; **MAT244H** Introduction to Ordinary Differential Equations; **PHY251H** Electricity and Magnetism; **PHY255H** Oscillations and Waves; **PHY256H** Introduction to Quantum Physics

Third year:

MAT334H Complex Variables; **PHY252H** Thermal Physics; **PHY351H** Classical Mechanics; **PHY352H** Electromagnetic Theory; **PHY355H** Quantum Mechanics I

Fourth year:

PHY457H Quantum Mechanics II; **PHY480H** Basics Statistical Mechanics/483H Relativity Theory I; **PHY491H** Current Interpretations of Quantum Physics

Recommended Sequence of Courses in Philosophy:

First year: **PHL 100Y** Introduction to Philosophical Problems

Second year: **HPS 250H** Introductory Philosophy of Science(required)

Higher years:

PHL 245H Modern Symbolic Logic; 344H Metalogic/345H Intermediate Logic/347H Modal Logic/349H Set Theory

PHL 355H Philosophy of Natural Science; 356H Philosophy of Physics (required)

PHL 415H Seminar in Philosophy of Science/**PHL 482H** Advance Topics in Philosophy of Natural Science

2.5 other courses in philosophy, at least one half-course at the 300+ level.

Academic Relevance: Many contemporary philosophers believe that developments in the physical sciences have important ramifications for basic philosophical questions in metaphysics and epistemology. But students need a solid grounding in the mathematical and physical sciences in order to appreciate fully current discussions in the philosophy of physics. This program will provide a structure in which students will be able to acquire the necessary background in both philosophy and science for pursuing these topics. It will also provide undergraduate students the opportunity to take advantage of U of T's strong faculty in the Philosophy of Science.

Many issues in fundamental physics, such the interpretations of experimental data and theoretical models, raise unavoidable philosophical issues. This program will be particularly useful for students interested in areas such as the foundations of quantum mechanics or the Bayesian analysis of data.

Estimated Enrolment: 10 – 15

11.0 Diaspora and Transnational Studies

Requirements:

Major program

(7 full courses or their equivalents, including at least two 300+ series courses)

Students wishing to do a Diaspora and Transnational Studies **Major** Program must successfully complete the equivalent of seven full courses, fulfilling ALL of the following requirements:

- (1) **DTS 201H1** and **DTS 202H1**: enrolment restricted to students who have successfully completed 4.0 FCEs.
- (2) Five full-course equivalents (FCEs) from Group A and B courses, with at least two FCEs from each group.
- (3) Coverage must include at least two diasporic communities or regions, to be identified in consultation with the program advisor.
- (4) Two 400-level capstone seminars (1.0 FCE).

Group A = Humanities courses

Group B = Social Sciences courses

Students are responsible for checking the co- and prerequisites for all courses in Groups A and B.

Minor program

(4 full courses or their equivalent, including at least one 300+ series course)

Students wishing to do a Diaspora and Transnational Studies **Minor** Program must successfully complete the equivalent of four full courses, fulfilling ALL of the following requirements:

- (1) **DTS 201H1** and **DTS 202H1**: enrolment restricted to students who have successfully completed 4.0 FCEs.
- (2) Three full-course equivalents (FCEs) from Group A and B courses, with at least one FCE from each group.

Group A = Humanities courses

Group B = Social Sciences courses

Students are responsible for checking the co- and prerequisites for all courses in Groups A and B.

Note: course = one full course or the equivalent in half courses. Please see the Faculty of Arts & Science Calendar for details.

DTS 201H1 Introduction to Diaspora and Transnational Studies I – 26 Lectures

An interdisciplinary introduction to the study of diaspora, with particular attention to questions of history, spatiality, globalization, cultural production and the creative imagination. Material will be drawn from Toronto as well as from diasporic communities in other times and places.

DTS 202H1 Introduction to Diaspora and Transnational Studies II – 26 Lectures

An interdisciplinary introduction to the study of diaspora, with particular attention to questions of history, spatiality, globalization, cultural production and the creative imagination. Material will be drawn from Toronto as well as from diasporic communities in other times and places.

Prerequisite: DTS 201H1

For Distribution Requirement purposes, these are social science or humanities courses.

COURSES FOR THE DIASPORA AND TRANSNATIONAL STUDIES PROGRAM

THE THREE CAMPUSES

2 December 2004

KEY:
CR = CO-REQUISITE
P = PRE-REQUISITE
RP = RECOMMENDED PREPARATION
EXC = EXCLUSION

ST. GEORGE CAMPUS

ANTHROPOLOGY

- **JAP256H – African Systems of Thought:** E= JAP365H [?]
- **ANT347Y –Metropolis: Global Cities:** RP= ANT204Y
- **ANT426H – Orientalism: Western Views of the Other:** P=ANT323Y/329Y or any 300 level course in INI/VIC/NMC/Jewish Studies
- **ANT440Y – Global Society in Transition:** EXC=ANT440H; P= ANT204Y, at least one area course in ANT

ENGLISH

- **ENG 256Y Twentieth-Century North-American Jewish Literature:**
- **ENG 277Y Introduction to African Canadian Literature**
- **ENG 279Y Chinese North American Literature in English**

FINE ART HISTORY

- **FAH466H—Colonialism and Modernity in South Asian Arts**

FINNO-UGRIC STUDIES

- **FIN320H – The Finnish Canadian Immigrant Experience**

FRENCH

- **FRE332H – Francophone Literature I :** P=Any 200 level FRE/FSL COURSE; RP=FRE240Y
- **FRE431H – Francophone Literature II :** CR OR P: Any 300 level FRE/FSL COURSE; RP=FRE240Y, one 300 level FRE Literature course

GEOGRAPHY

- **GGR350H – Canada in a Global Context:** RP: GGR246H &/OR GGR340H
- **GGR363H – Critical Geographies: An Introduction to Radical Ideas on Space, Society and Culture**
- **GGR452H – Space, Power, Geography: Understanding Spatiality :** P= GGR124Y; RP=GGR339H/361H

GERMAN

- **GER362H – Soviet and Kosher: Jewish Culture in the Soviet Union:** RP=HIS208Y/242H/250Y or dept. permission
- **GER364H – History of Yiddish Cinema (for 2005)**

HISTORY

- **HIS206Y – Medieval History of the Jewish People:**
- **HIS208Y – Modern History of the Jewish People:** P= HIS103Y/108Y/109Y
- **HIS294Y – Caribbean History and Culture**
- **HIS296Y – Black Freedom :** EXC=NEW296Y
- **HIS303Y - The Mediterranean, 600-1700: Crusade, Colonialism, Diaspora:** RP=HIS220 or NMC 273 or some medieval history

- **HIS305H – Popular Culture and Politics in the Modern Caribbean:** P=HIS294Y
- **HIS326Y – Chinese Migration**
- **HIS352H – Women and Gender in Modern Jewish History:** RP: A course in European Jewish History or in Gender/Women History
- **HIS356H – Zionism and Israel:** EXC=HIS356Y; RP= A course in modern European, Jewish or Middle Eastern History
- **HIS359H – Regional Politics and Radical Movements in the 20th century Caribbean:** RP=HIS294Y
- **HIS360Y – African-Canadian History, 1606- Present:** RP=HIS263Y
- **HIS370H The Black Experience in the United States Since the Civil War:** P=HIS271Y
- **HIS476 Voices From Black America:** P=HIS271Y
- **HIS394H – South Asian Migration and Settlement:** RP: A course in Indian History
- **HIS417H Globalization, Science, and Technology**
- **HIS446Y – Gender and Slavery in the Atlantic World:** EXC=HIS446Y; P=HIS245Y/291Y/294Y/295Y
- **HIS456Y Black Slavery in Latin America:** P: HIS291Y/292Y/294Y/295Y/394Y/408Y/IAS200Y/320H
- **HIS480H – Modernity and its Others: History and Postcolonial Critique:** P= A mark of 73% or higher in HIS282Y or permission of instructor; RP= History of colonialism, political theory, or postcolonial literatures
- **HIS487H – Travelers and Scholars East/West**
- **UNDER DEVELOPMENT – a 3rd year course on the Irish Diaspora (David Wilson)**

INNIS COLLEGE

- **INI327Y—Race and Representation: PR=INI115Y**

ITALIAN STUDIES

- **ITA233Y – Ethnicity and Mainstream Italian Canadian Culture**
- **ITA334H – Italian Canadian Literature I: Life in a New World**
- **ITA493H – Italian Canadian Literature II:** RP= One of ITA233Y/334H

NEAR AND MIDDLE EASTERN CIVILIZATIONS

- **NMC357H – Mass Media and/in the Middle East**
- **NMC385H – Intellectuals of the Arab World:** RP=NMC276Y/278/378Y
- **NMC475H – Orientalism and Occidentalism**
- **NMC274Y—Steppe Frontier in Islamic History**
- **NMC370Y—Ancient Israel**

AFRICAN STUDIES

- **NEW150Y – Introduction to African Studies**
- **NEW296Y—Black Freedom :** EXC=HIS296Y

CARIBBEAN STUDIES

- **NEW223Y – Caribbean Literature and Society**
- **NEW224Y – Caribbean Thought I :** RP=HIS106Y
- **NEW324Y – Caribbean Thought II :** P=NEW224Y
- **NEW325H – Caribbean Women Thinkers**
- **NEW326Y – Indenture, Survival, Change**

EQUITY STUDIES

- **NEW343H – The Romani Diaspora in Canada**

WOMEN’S STUDIES

- **NEW368H – Gender and Cultural Difference: Transnational Perspectives:**
P=NEW160Y/261Y/permission of instructor
- **NEW369Y – Studies in Post-Colonialism:** P=NEW160Y/261Y/permission of instructor
- **NEW - Gender and the Sacred: African Cosmologies in the Wake of the Middle Passage**

POLITICAL SCIENCE

- **POL349Y – Globalization and Urban Politics in Europe and North America :** EXC=349H/
P=102Y/103Y/203Y/214Y
- **POL358Y – Post-Colonial Questions: Politics, Knowledge, Power:**
P=POL200Y/201Y/NEW150Y
- **POL443H - The Colonial State and its Forms of Power:** P=201Y/301Y/320Y

RELIGION

- **RLG341H – Dreaming of Zion: Exile and Return in Jewish Thought:**
P=RLG100Y/202Y/280Y/342Y
- **RLG430H – Jewish Culture in Medieval Latin, Greek, and Arabic Europe**

ST. MICHAELS

- **SMC413H – The Irish in Canada:** EXC=SMC411H (93-94)/ 412H (94-95)
- **SMC414H – The Scots in Canada**
- **SMC416H – Irish Nationalism in Canada and the United States:** permission of instructor

SLAVIC LANGUAGE AND LITERATURE

- **SLA238H – Literature of the Ukrainian-Canadian Experience:** RP: Any course in literature

SOCIOLOGY

- **SOC218Y –Asian Communities in Canada:** EXC=SPC342Y/394Y; P=SOC101Y or permission of department
- **SOC341Y – The Jewish Community in Europe and North America:** EXC: SOC330Y
- **SOC344Y – Contemporary International Migration:** P=SOC101Y
- **SOC383H – The Sociology of Women and International Migration :** P=SOC101Y

SPANISH AND PORTUGUESE

- **SPA480H Theories of Culture in Latin America**
- **SPA486H Contemporary Caribbean Literatures and Identities**

VICTORIA COLLEGE

- **VIC350Y – Creative Writing: A Multicultural Approach:** P= Four credits + Permission of the DTS Director required

SCARBOROUGH CAMPUS:

ANTHROPOLOGY AT SCARBOROUGH

- **ANTC34H - The Anthropology of Transnationalism**
- **ANTB08H - The Chinese Diaspora**

ENGLISH AT SCARBOROUGH

- **ENG B17H – Contemporary Literature from the Caribbean:** EXC= ENG253Y, ([ENGB23Y](#)), ENG233Y, NEW223Y
- **ENG C13H - Ethnic Traditions in American Literature**
- **ENG C70H- Immigrant Exp. in Literature Till 1980:** EXC= ([ENG C71Y](#)); P= [ENGB01H](#) & ENG B02H & [ENGB03H](#) & [ENGB04H](#)

- **ENGC71H Immigrant Experience in Literature Since 1980:** EXC= ([ENGC71Y](#)); P= [ENGB01H](#) & ENG B02H & [ENGB03H](#) & [ENGB04H](#)
- **ENG D87 – Between Traditions and Freedoms: Writing by Canadians of Asian Descent:** Limited enrolment: 22; P= 2 C-level courses in English.

FRENCH AT SCARBOROUGH

- **FREB28H - The Francophone World:** EXC= FSL362Y; P= [[FREA01H](#) & [FREA02H](#)] or ([FREA10Y](#)) or equivalent or permission of instructor
- **FREB35H - Francophone Literature:** EXC= FRE332H; P= [[FREA01H](#) & [FREA02H](#)] or ([FREA10Y](#)) or equivalent or permission of instructor
- **FREB70H - Cinema of the Francophone World:** P= [FREA01H](#) and [FREA02H](#) or equivalent or permission of instructor
- **FRE C47H- Special Topics in Linguistics: Pidgin and Creole Languages:** P= [[FREB01H](#) & [FREB02H](#)] or ([FREB10Y](#)) or equivalent or permission of instructor

GEOGRAPHY AT SCARBOROUGH

- **GGRC19H3 - Spaces of Multiraciality: Critical Mixed Race Theory:** P= [ANTB16H](#) or [GGRB13H](#) or [IDSB01H](#) or [SOCA01H](#) or [WSTA01H](#) or permission of instructor
- **GGRC45H - Local Geographies of Globalization:** EXC= [GGRC41H](#); P= [GGRB05H](#) or [GGRB20H](#) or [ANTB16H](#) or ([ANTB16Y](#)) or [IDSB01H](#) or permission of instructor

HISTORY AT SCARBOROUGH

- **HISC14H Global Foodways**
- **HISC36H- People in Motion: Immigrants and Migrants in US History**
- **HIS C45 – Immigrants and Race Relations in Canadian History:** P= Any four FCEs
- Canadian Area
- **[HISC48H3](#) - Black Canadian History:** P=([HISB04Y](#)) or [[HISB40H](#) & [HISB41H](#)]; Canadian Area

POLITICAL SCIENCE AT SCARBOROUGH

- **POLA81H - Leaving Home: Politics and Emigration**

VISUAL CULTURE AND COMMUNICATIONS AT SCARBOROUGH

- **VPA B09H – Dialogues in the Diaspora**
- **VPAB50H – Africa through the Photographic Lens**
- **VPB C52H - Transnationalism and the Visual Arts:** P= [VPHB48H](#), [VPHB58H](#), [VPHB59H](#) or permission of instructor

SOCIOLOGY AT SCARBOROUGH

- **SOC25H - Comparative Ethnic and Race Relations:** Limited enrolment: 60; P= [[SOCA01H](#) & [SOCA02H](#) or ([SOCA01Y](#))], [SOCB40H](#), [SOCB41H](#), [SOCB42H](#), [SOCB43H](#), [[SOCB52H](#) or [SOCB53H](#)]
- **SOC34H - Globalization: Causes, Consequences and Critique:** Limited enrolment: 60; P= [[SOCA01H](#) & [SOCA02H](#) or ([SOCA01Y](#))], [SOCB40H](#), [SOCB41H](#), [SOCB42H](#), [[SOCB43H](#) or [IDSB01H](#)]

MISSISSAUGA CAMPUS

ANTHROPOLOGY AT UTM

- **ANT361H5 - African Cultures:** P= (Formerly ANT212Y5: Contemporary African Cultures)

POLITICAL SCIENCE AT UTM

- **POL362H5 Decolonizing Political Science I**
- **POL363H5 Decolonising Political Science II**

ENGLISH DEPARTMENT AT UTM

- **ENG272H—Literature and Exile**

UTM FRENCH COURSES

- **FRE290Y5 Aspects of Francophone Cultures**
- **FRE390H5 Women of the Francophone World:** FRE180Y5 is a prerequisite for students wishing to count this course towards a Major or Specialist in French. Such students must submit all written work and exams in French and petition the Department. (Formerly FRE290H5)
- **FRE395H – Films of the Francophone World:** P= FSL, 261Y/280Y if work done in French, none if work done in English

HISTORY AT UTM

- **HIS 2XXH5 Diasporic Canada**
- **HIS 3XXH Diasporic Histories & Cultures**

LINGUISTICS

- **LIN366H—Creoles**

WOMEN'S AND GENDER STUDIES AT UTM

- **WGS335H5 Immigrant and Refugee Women:** EXC= NEW 335H1; P= [WGS200Y5](#) (Formerly ERI335H5)
- **WGS369Y5 Gender, Colonialism and Cultural Resistance:** RP= [WGS200Y5](#) (Formerly [ERI200Y5](#))

SOCIOLOGY AT UTM

- **SOC277Y5 – Globalization:** P= [SOC101Y5](#)
- **SOC332H5 – Race and Ethnicity:** EXC= [SOC330H5](#); P= [SOC101Y5](#), 1.0 SOC course other than [SOC200Y5](#).
- **SOC333H5 – Race and Ethnicity II:** EXC= [SOC330H5](#); P= [SOC101Y5](#), [332H5](#), 1.0 SOC course other than [SOC200Y5](#)
- **SOC338H5 – Global Diasporas**
- **SOC353H5 – Sociology of Globalization since 1945:** P= [SOC101Y5](#), 1.0 SOC course at the 200 level
- **SOC354H5 – Global Sociology:** P= [SOC101Y5](#), 1.0 SOC course at the 200 level

VISUAL CULTURE AND COMMUNICATION AT UTM

- **VCC302: Visual Culture Through the Post Colonial Lens:** P= [VCC201H5/CCT201H5/FAH201H5](#)
- **VCC 304: Visual Culture and the Construction of Identity:** P= [CCT200H5/VCC201H5/CCT201H5/FAH201H5/PSY321H5/P.I.](#)

Academic Relevance: Where is home? Need it be in one place? Is it always attached to territory? Diaspora and transnational studies examines the historical and contemporary movements of peoples and the complex problems of identity and experience to which these movements give rise as well as the creative possibilities that flow from movement. The program is **comparative** and **interdisciplinary**, drawing from the social sciences, history and the arts. Students are required to take two linked half-courses that offer an introduction to a broad array of themes and disciplinary methodologies. The program offers a wide selection of additional courses, giving students the opportunity to learn about a range of diasporic communities as well as key debates in the field. Students will complete the program with a 400-level capstone course (or two linked half-courses).

B. Deleted Programs

1.0 History and Philosophy of Science and Technology

- 1) History and Philosophy of Science Specialist
- 2) History and Philosophy of Science Major
- 3) History and Philosophy of Science Minor
- 4) History of Science and Technology Specialist
- 5) History of Science and Technology Major
- 6) History of Science and Technology Minor

Rationale for Deletion: All programs will be replaced with the new History and Philosophy of Science and Technology Major.

2.0 Department of Slavic Languages and Literatures: Specialist in Polish Language and Literature

Rationale for Deletion: Insufficient resources and demand for program.

3.0 Department of Slavic Languages and Literatures: Specialist and Major in Russian and East European Studies

Rationale for Deletion: Program superceded by European studies.