The following proposals, received on DAP between June 1-15, 2011, have now been approved. For more information on the DAP process, see the Academic Handbook at [www.uwo.ca/univsec/handbook](http://www.uwo.ca/univsec/handbook).

**FACULTY OF ARTS AND HUMANITIES**

**FRENCH STUDIES**

*Effective September 1, 2011, the following course will be revised:*

**French 3570F/G/Z-3572F/G/Z - Culture and Literature in Society: France in the 17th Century**
Through the study of the cultural productions from the 17th Century in France, students will deepen their knowledge of specific productions as well as of critical approaches to them in order to be able to formulate their own critical perspectives and to communicate them effectively and accurately orally and in writing. Prerequisite(s): French 2600E or (both French 2605F/G and 2606F/G) or permission of the Department. **Permission of the Department is required for all Z-courses.**
3 lecture/tutorial hours, 0.5 course.

**French 4102F/G/Z - Senior Seminar**
For specific topics consult the Department of French Studies. Prerequisite(s): One 3000-level French course in literature. **Permission of the Department is required for all Z-courses.**
3 lecture/tutorial hours, 0.5 course.

**WRITING**

*Effective September 1, 2011, the following courses will be introduced:*

**Writing 1030F - Writing For Professional Success in Nursing**
This course serves as an introduction to the basic principles and techniques of good writing, an integral tool for learning and a vital source of communication in the Nursing profession. The course will emphasize practical work and the development of writing skills for a variety of styles and genres appropriate to the profession. 3 hours, 0.5 course.

**Writing 3300F/G - Internship in Writing**
Students registered in a Certificate or Minor degree module in Writing and who have a cumulative average of 80% in Writing courses may elect to do an internship with an approved institution as a course at the 3300 level. Course requirements will be set individually prior to registration. Prerequisite(s): Permission of the Program. 3 hours, 0.5 course.

*Effective September 1, 2011, the following courses will be revised*

**Writing 2203F/G - From Headline to Deadline: Writing for Publication**
The course will improve writing intended for various forms of publication, including media releases and public letters, reviews and reports, newspaper and magazine articles. Students will develop skills in the preparation, writing, copy-editing, and formatting of materials for publication, focusing on effective organization at every level of writing. Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program. 3 hours, 0.5 course.

**Writing 2204F/G - Short Flicks: An Introduction to Screenwriting**
In this course students will analyze short and feature film scripts, workshop their own scripts and respond to the scripts of other students, and draft and revise a 15 minute short film script. Topics will include image, three-act structure, dialogue, character development, theme, scene construction, and point of view. Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program. 3 hours, 0.5 course.
Writing 2205F/G - Hot Type: Technical Writing
Students will examine how the technical writer interprets and appropriately presents specialized information. Assignments will increase in complexity from letters and memos to document design, technical definition and description, instructions, proposals, the research report. Students will combine analysis, organization, and visual design to craft oral and written communications.
Antirequisite(s): The former Writing 105F/G.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 computer lab hours, 0.5 course.

Writing 2206F/G - Minding Your Ps and Qs: Technical Editing
This course introduces students to the basic principles of editing with a specific emphasis on technical documents. Topics include editing for: organization and structure; audience; usability; style; and grammar, mechanics, punctuation, and spelling.
Antirequisite(s): The former Writing 291F if taken in 2006-07 or 2007-08.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 lecture hours, 0.5 course.

Writing 2207F/G - My Name is url: Writing for the Web
This course will explore the theory and practice of digital writing technologies. Topics covered include: the production, management, and reception of digital texts; web writing style; hypertext and linking; authorship; copyright. Students will evaluate the design and content of web texts and create their own web sites.
Antirequisite(s): The former MIT 207F/G.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 computer lab hours , 0.5 course.

Writing 2208F/G - Teaching Writing
This course will provide the theoretical background and the practical experience students need to be effective writing teachers and more knowledgeable writers. Class study of composition theory and pedagogy will be complemented by a supervised teaching practicum.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.

Writing 2209F/G - Visual Information Packaging: Document Design
This course introduces students to principles of document design and methods of integrating visual and verbal information in print documents such as brochures, manuals, and flyers. Students will apply these principles to a variety of design projects using the computer lab facilities.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 computer lab hours, 0.5 course.

Writing 2210F/G - GrammarPhobia Demystified: Contemporary Grammar for Writers
A study of how the English language works in practice, the course will include consideration of writing processes and the practical application of various theories of rhetoric and syntax. Students will analyse and imitate a variety of types of writing samples, and will develop a sophisticated understanding of writing in English.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 computer lab hours, 0.5 course.

Writing 2211F/G - The Naked Writer: Fundamentals of Creative Writing
Students will explore fundamentals of creative writing and challenge their creativity through the writing of fiction, poetry and creative nonfiction. In craft talks and in small workshop settings, students will examine their work and the work of others for the use of basic elements such as character, voice, and setting.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.
Writing 2212F/G - Figures of Speech: Writing for Oral Presentation
The ability to influence people through oral discourse offers a powerful, desirable skill in any profession. Effective oral communication depends substantially on improving specific writing techniques rather than focusing solely on skills in delivery. By refining writing techniques, participants in this course will gain confidence in constructing oral presentations.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.

Writing 2213F/G - LOL: Humour Writing
Writing Humour is designed to help you write for greater impact while introducing you to different aspects of the genre, using a blend of lecture and workshop. You will have the opportunity to write something funny every week, get feedback, and learn about potential markets for your work.
Antirequisite(s): The former Writing 294G if taken in 2006-07.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 lecture hours, 0.5 course.

Writing 2214F/G - Memoir, Memories, and Disclosure: Writing Creative Non-Fiction
This course is designed for students who wish to write what's true in the form of personal essay, memoir and literary journalism. We will explore how writers use narrative techniques and structure to create essays both to the traditional forms and challenge them in unexpected, important and engaging ways.
Antirequisite(s): The former Writing 295F if taken in 2006-07 or 2007-08.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 lecture hours, 0.5 course.

Writing 2215F/G - Encoding Persuasion: Rhetorical Theory
This course introduces students to basic precepts of rhetorical theory, and their application to communication analysis and the practice of writing. Topics will include rhetorical argumentation, 'publics' theory, and conceptions of rhetoric as both a social practice and a method.
Antirequisite(s): Writing 2292F (2008-2009); the former Writing 292F if taken in 2007-2008 or in 2005-2006.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2111F/G, 2121F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 lecture hours, 0.5 course.

Writing 2216F/G - Rhetoric: Law Talk
This course examines the forms and function of rhetoric in legal discourse and debate. Principles drawn from rhetorical theory, ancient and modern, will be tested through their application to legal texts drawn from various sources, including trial transcripts, and academic and public commentary on legal issues.
Antirequisite(s): Writing 2293G (2008-2009); the former Writing 293G if taken in 2007-2008 or 2006-2007.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2111F/G, 2121F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 lecture hours, 0.5 course.

Writing 2291F/G - Special Topics in Writing
Please consult the Writing, Rhetoric, and Professional Communication Office, Faculty of Arts and Humanities for current offerings.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.

Writing 2292F/G - Special Topics in Writing
Please consult the Writing, Rhetoric, and Professional Communication Office, Faculty of Arts and Humanities for current offerings.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.
Writing 2293F/G - Special Topics in Writing
Please consult the Writing, Rhetoric, and Professional Communication Office, Faculty of Arts and Humanities for current offerings.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.

Writing 2294F/G - Special Topics in Writing
Please consult the Writing, Rhetoric, and Professional Communication Office, Faculty of Arts and Humanities for current offerings.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.

Writing 2295F/G - Special Topics in Writing
Please consult the Writing, Rhetoric, and Professional Communication Office, Faculty of Arts and Humanities for current offerings.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.

Writing 2296F/G - Special Topics in Writing
Please consult the Writing, Rhetoric, and Professional Communication Office, Faculty of Arts and Humanities for current offerings.
Prerequisite(s): At least 65% in one of Writing 2101F/G, 2121F/G, 2111F/G or 2131F/G; or at least 85% in Writing 1000F/G; or permission of the program.
3 hours, 0.5 course.

Writing 2299F/G - Re-visioning Self: Creating Your Professional Portfolio
In this half-course students will write new documents and revise documents written in previous Writing classes to include in a portfolio of their work. The portfolio will be both online and printed. Class time will be devoted to a combination of lecture and writing workshop.
Prerequisite(s): At least 65% in one of Writing 2101F/G, Writing 2121F/G, Writing 2111F/G, or Writing 2131F/G; or at least 85% in Writing 1000F/G; and 1.0 additional Writing courses numbered 2200 or above.
3 hours, 0.5 course.

Effective September 1, 2011, the following programs will be revised:

CERTIFICATE IN WRITING

Admission Requirements
A grade of 65% in one of Writing 2101F/G (Writing 2121F/G for MIT students) Writing 2101F/G, 2121F/G, 2111F/G, or 2131F/G is required for entrance to the program.

DIPLOMA IN WRITING

Admission Requirements
A grade of 65% in Writing 2101F/G (Writing 2121F/G for MIT students) Writing 2101F/G, 2121F/G, 2111F/G, or 2131F/G is required for entrance to the program.

FACULTY OF SCIENCE

ANATOMY AND CELL BIOLOGY

Effective September 1, 2011, the following course will be withdrawn:
**Anatomy and Cell Biology 3350A - Functional Neuroanatomy**
Lectures, demonstrations and laboratory periods on the gross and functional anatomy of the human brain and spinal cord.
3 lecture/lab/demonstration hours, 0.5 course.
Restricted to students in the Occupational Therapy and Physical Therapy programs.

*Effective September 1, 2011, the following course will be revised:*

**Anatomy and Cell Biology 4411B - Discovery-Based Cell Biology II**
This course focuses on cell signalling diseases, cell specialization, stem cells, cloning and the cell biology of aging. Students will be trained in effective verbal and written scientific presentations.
Prerequisite(s): Anatomy and Cell Biology 4410A {Either Biology 3316A/B with a minimum mark of 70% (preferred) or Anatomy and Cell Biology 3309 with a minimum mark of 75%}
3 lecture hours, 0.5 course.

**BIOLOGY**

*Effective September 1, 2011, the following courses will be introduced:*

**Biology 3444F/G - Molecular Ecology**
An introduction to the use of molecular tools in addressing both basic and applied questions in ecological research, including population, behavioural, community and ecosystem ecology. Lectures and student-led seminars develop basic knowledge and theory underlying molecular ecology, and present many recent case studies from the primary literature.
Prerequisite(s): Biology 2483A, 2581B.
2 lectures hours, 1 tutorial/lecture. 0.5 course

**Biology 4920F/G - Seminar in Biology**
Current research in biology critically reviewed and discussed through a combination of student presentations and written assignments.
Antirequisite(s): Biology 4930F/G, 4931F/G, 4944F/G, 4950F/G, or the former Biology 4932F/G, 4941E, 4946E, 4943G.
Prerequisite(s): Completion of at least 1.5 Biology courses at the 3000 level or above and registration in year 4 of an Honors Specialization module offered through the Department of Biology.
3 seminar/tutorial hours, 0.5 course.

**Biology 4930F/G - Seminar in Cell Biology**
Current research in cell biology critically reviewed and discussed through a combination of student presentations and written assignments.
Antirequisite(s): Biology 4920F/G, 4931F/G, 4944F/G, 4950F/G or the former Biology 4932F/G, 4941E, 4943E, 4946E.
Prerequisite(s): Biology 3316A/B, 3326F/G, and an additional 0.5 course in Biology at the 3000-level or above; and registration in Year 4 of an Honors Specialization module offered by the Department of Biology.
3 seminar/tutorial hours, 0.5 course.

**Biology 4950F/G - Seminar in Genetics**
Current research in genetics critically reviewed and discussed through a combination of student presentations and written assignments.
Antirequisite(s): Biology 4920F/G, 4930F/G, 4931F/G, 4944F/G, or the former Biology 4932F/G, 4941E, 4943E, 4946E.
Prerequisite(s): A minimum grade of 70% in Biology 3596A/B and enrollment in year 4 of the Honors Specialization in Genetics, or permission of the Genetics Undergraduate Coordinator.
3 seminar/tutorial hours, 0.5 course.

*Effective September 1, 2011, the following courses will be withdrawn:*

**Biology 4932F/G - Seminar in Conservation Biology**
This course exposes students to detailed analysis of topical issues in Conservation Biology. Student led discussions of the science, politics and non-government organization activities relating to issues ranging from local to international scale will expose students to the many aspects of conservation biology.
Antirequisite(s): Biology 4931F/G, 4941E, 4943E, 4946E.
Prerequisite(s): Biology 3442F/G; and completion of at least 1.0 additional Biology course at the 3000 level or above; and registration in year 4 of an Honors Specialization module offered by the Department of Biology, or a Major in Conservation Biology.
3 lecture/tutorial hours, 0.5 course.

Biology 4941E - Seminar in Biology
A critical review and evaluation of scientific papers and laboratory data in a series of seminars, involving guest speakers and student participation, to give training in the technique of presentation of scientific reports.
Antirequisite(s): Biology 4931F/G, 4932F/G, 4943E, 4944F/G, 4946E.
Prerequisite(s): Completion of at least 1.5 Biology courses at the 3000 level or above and registration in year 4 of an Honors Specialization module offered through the Department of Biology.
Corequisite(s):
Pre-or Corequisite(s):
Extra Information: 3 lecture/tutorial hours, 1.0 course.

Biology 4943E - Seminar in Genetics
Topics to be chosen each year to integrate and augment the study of genetics as presented in other genetics courses.
Antirequisite(s): Biology 4931F/G, 4932F/G, 4941E, 4944F/G, 4946E.
Prerequisite(s): A minimum grade of 70% in Biology 3596A/B and enrollment in year 4 of the Honors Specialization in Genetics, or permission of the Genetics Undergraduate Coordinator.
3 seminar/tutorial hours, 1.0 course.

Biology 4946E - Seminar in Cell Biology
Current topics in cell biology, critically reviewed through faculty and student seminars.
Antirequisite(s): Biology 4931F/G, 4932F/G, 4941E, 4943E, 4944F/G.
Prerequisite(s): Biology 3316A/B and 3326F/G; an additional 0.5 course in Biology at the 3000-level or above; and registration in Year 4 of an Honors Specialization module offered by the Department of Biology.
3 seminar/tutorial hours, 1.0 course.

Effective September 1, 2011, the following courses will be revised:

Biology 1201A - General Biology I
This course provides an understanding of fundamental biological concepts with emphasis on function in and relevance to humans. Topics include inheritance, evolution, ecology, behaviour, ecosystem health. This course is not available to students enrolled in the Faculty of Science (students registered in the Faculty of Science should select Biology 1001A).
Antirequisite(s): Biology 1001A, Biology 1225, or the former Biology 1222, 1223.
Prerequisite(s): Grade 12U (SB14U) Biology or Grade 11U (SB13UA) Biology and permission of the Department.
3 2 lecture hours, 3 laboratory/tutorial hours. 0.5 course.
Note: The combination of Biology 1201A and 1202B (with the appropriate marks) can be a prerequisite for senior Biology courses and admission to modules offered by the Department of Biology and the Basic Medical Science departments.

Biology 1202B - General Biology II
This course provides an understanding of fundamental biological concepts with emphasis on function in and relevance to humans. Topics include molecular genetics, physiology, bioenergetics. This course is not available to students enrolled in the Faculty of Science (students registered in the Faculty of Science should select Biology 1002B).
Antirequisite(s): Biology 1002B, Biology 1225, or the former Biology 1222, 1223.
Prerequisite(s): Grade 12U (SB14U) Biology or Grade 11U (SB13UA) Biology and permission of the Department.
3 2 lecture hours, 3 laboratory/tutorial hours. 0.5 course.
Note: The combination of Biology 1201A and 1202B (with appropriate marks) can be a prerequisite for senior Biology courses and admission to modules offered by the Department of Biology and the Basic Medical Science departments.
**Biology 4931F/G - Seminar in Physiology**
Current topics in physiology critically reviewed and discussed through a combination of student presentations and written assignments.

Antirequisite(s): Biology 4932F/G, 4941E, 4944F/G, 4946E. Biology 4920F/G, 4930F/G, 4944F/G, 4950F/G, or the former Biology 4932F/G, 4941E, 4943E, 4946E.

Prerequisite(s): One of Biology 3660A/B, the former Biology 3651A/B, or Physiology 3120; and completion of at least 1.0 additional Biology courses at the 3000-level or above; and registration in Year 4 or an Honors Specialization module offered by the Department of Biology. One of Biology 3601A/B, 3603A/B, 3660A/B or Physiology 3120, or the former Biology 3651A/B; and completion of at least 1.0 additional Biology courses at the 3000-level or above; and registration in Year 4 or an Honors Specialization module offered by the Department of Biology.

3 lecture/tutorial hours, 0.5 course.

**Biology 4944F/G - Seminar in Ecology and Evolution**
Current topics in ecology and evolution critically reviewed and discussed through a combination of student presentations and written assignments.

Antirequisite(s): Biology 4920F/G, 4930F/G, 4931F/G, 4941E, 4943E, 4946E, the former Biology 4932F/G, 4941E, 4943E, 4946E.

Prerequisite(s): Completion of at least 1.5 Biology courses at the 3000-level or above and registration in Year 4 of an Honors Specialization in Biology.

3 lecture/tutorial hours, 0.5 course.

*Effective September 1, 2011, the following modules will be revised:*

**HONORS SPECIALIZATION IN BIOLOGY**

**Module**
10.0 courses:
3.0 courses: Biochemistry 2280A, Biology 2290F/G, 2382B, 2483A, 2486A, 2581B.
0.5 course: Chemistry 2213A/B.
0.5 course: Biology 2601A/B, or the former Biology 2660A/B or 2672A/B.
0.5 course from: Biology 2244A/B, [Statistical Sciences 2244A/B or the former Statistical Sciences 2122A/B.](#) Students may substitute Statistical Sciences 2035 or Psychology 2810 for this 0.5 course. 4.0 courses at the 2200 level or above*, chosen from the Department of Biology and the Basic Medical Sciences disciplines (see below), of which at least 3.0 courses must be chosen from the Department of Biology. A maximum of 1.0 course may be at the 2200-2999 level and at least 1.5 of these courses must have a laboratory component.

Basic Medical Sciences Disciplines: Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Physiology, and Pharmacology.

Courses in History of Science are not included.

* Microbiology and Immunology 2100A and/or Pharmacology 2060A/B may be taken to satisfy this requirement.

**Notes:**
1. If students take Statistical Sciences 2035 or Psychology 2810 instead of Biology 2244A/B or [Statistical Sciences 2244A/B or the former Statistical Sciences 2122A/B](#), the module becomes 10.5 courses.
2. Many 4000-level Biology courses require the completion of 1.5 Biology courses at the 3000-level or above.
3. Students with specific Biology interests should visit the departmental website for course recommendations in various disciplines or contact a Biology Academic Counselor.
HONORS SPECIALIZATION IN GENETICS AND BIOCHEMISTRY

Module
10.0 courses:
0.5 course: Biochemistry 2280A.
2.5 courses: Biology 2290F/G, 2382B, 2486A, 2581B, 3596A/B.
0.5 course from: Biology 2444A/B or Statistical Sciences 2244A/B, or the former Statistical Sciences 2122A/B.
1.0 course: Chemistry 2213A/B and 2223B.
1.5 courses: Biochemistry 3380G, 3381A, 3382B.
0.5 course from: Biology 3594A, 3595A, 3597A/B, 3598A.
0.5 course from: Biology 3466B, 3592A, 3593B.
1.5 courses from: Biology 4289A/B, 4510F/G, 4540G, 4560B, 4561F, 4562B, 4970F/G, Microbiology and Immunology 4700B.
1.0 course: Biochemistry 4410A and 4420B.
0.5 course from: Biochemistry 4435B, 4445F, 4450A, 4463G.

Notes:
1. Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A, and a minimum average of 65% in Chemistry 2213A/B and 2223B.
2. Biology 3596A/B requires a minimum mark of 70% in each of Biology 2581B and 2290F/G.
Students having a minimum mark of 70% in Biochemistry 2280A will be given priority in registration for Biochemistry 3380G.

HONORS SPECIALIZATION IN GENETICS

Module
10.0 courses:
0.5 course: Biochemistry 2280A.
4.5 courses: Biology 2290F/G, 2382B, 2486A, 2581B, 3596A/B, 4582, 4943E, 4950F/G, or the former Biology 4943E.
0.5 course: Chemistry 2213A/B.
0.5 course: Biology 2244A/B, Statistical Sciences 2244A/B, or the former Statistical Sciences 2122A/B.
Students may substitute Statistical Sciences 2035 or Psychology 2810 for this 0.5 course.
0.5 course from: Biology 2601A/B, or the former Biology 2606A/B, 2672A/B.
1.0 course: Biology 3466B, 3592A, 3593B.
1.0 course from: Biology 3594A, 3595A, 3597A/B, 3598A/B, the former Biology 390a, 391b.
1.5 course from: Biology 4289A/B, 4355F/G, 4510F/G, 4540G, 4560B, 4561F, 4562B, 4970F/G, 4999E (see notes 3 & 4), Microbiology and Immunology 4700B, the former Biology 451F/G.

Notes:
1. In addition to the normal progression requirements for Honors Specializations, students must obtain a minimum mark of 70% in each of Biology 2581B, 2290F/G and 3596A/B and 1.0 of the 3000 level Biology courses listed above, in order to progress within the Honors Specialization in Genetics.
2. If students take Statistical Sciences 2035 or Psychology 2810 instead of Biology 2244A/B or Statistical Sciences 2244A/B, or the former Statistical Sciences 2122A/B, the module becomes 10.5 courses.
3. If students take Biology 4999E, the module becomes 10.5 courses.
4. If students take both Biology 4999E AND Statistical Sciences 2035 or Psychology 2810, the module will be 11.0 courses.

HONORS SPECIALIZATION IN ANIMAL BEHAVIOUR (BSc)

Admission Requirements
Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including Biology 1001A or 1201A and Biology 1002B or 1202B or the former Biology 1222, 1223; Chemistry 1100A/B and 1200B or the former Chemistry 1050, 1020 or 023; Psychology 1000 or the former 1200; plus 1.0 additional course, with no mark in these principal courses below 60%.
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B or the former Physics 1020 or 1024, 022 or 025;
1.0 course from: Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, Calculus 1000A/B, 1100A/B, 1301A/B, 1501A/B, Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, 1600A/B, or the former Linear Algebra 1600A/B, or the former Mathematics 030, Statistical Sciences 1024A/B. If not completed in first year, the Mathematics requirement must be completed by the end of second year.

Module
10.0 courses:
1.5 courses: Biology 2290F/G, 2483A, 2486A.
1.5 courses: Psychology 2220A/B, 2800E.
0.5 course from: Psychology 2115A/B, 2210A/B.
0.5 course* from: Biology 2244A/B, Psychology 2810, Statistical Sciences 2035, 2244A/B, or the former 2122A/B.
1.5 courses from: Psychology 3226A/B, 3229A/B, 3285F/G, the former 3181F/G, 3280F/G.
1.5 courses from: Biology 2484A, 2601A/B, 3435F/G, 3442F/G, 3446B, 3475A/B, 3601A/B, 3602A/B, or the former Biology 2672A/B.
0.5 course from: Biology 3436F/G, Psychology 3221F/G.
0.5 course from: Biology 4259F/G, Psychology 3800F/G.
1.0 course* from: Biology 4436F/G, 4441F, 4611F/G, 4999E (1.5 courses).
1.0 course from: Psychology 4190F/G, 4195F/G, 4290F/G, 4295F/G, 4850E or 4851E.
* If Psychology 2810 or Statistical Sciences 2035 or Biology 4999E is taken, the number of courses in the module will be adjusted accordingly to equal 10.5 or 11.0 courses.

Notes:
1. The following Psychology courses count towards the 11.0 Faculty of Science course requirements for this BSc degree: Psychology 2115A/B, 2210A/B, 2220A/B, 2800E, 2810, 3221F/G, 3285F/G, 3800F/G, the former 3181F/G, 3280F/G.
2. Students planning to pursue a graduate degree in Biology or Psychology are strongly encouraged to take either Biology 4999E or Psychology 4850E, but both may not be taken in this module. Both Biology 4999E and Psychology 4850E or 4851E have limited enrollment.

MAJOR IN BIOLOGY

Module
6.0 courses:
0.5 course: Biochemistry 2280A.
2.5 courses: Biology 2290F/G, 2382B, 2483A, 2486A, 2581B.
0.5 course: Chemistry 2213A/B.
0.5 course: Biology 2601A/B, or the former Biology 2660A/B or 2672A/B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B, or the former Statistical Sciences 2122A/B. Students may substitute Statistical Sciences 2035 or Psychology 2810 for this 0.5 course.
1.0 additional course at the 2200 level or above in Biology.
0.5 additional course at the 2200 level or above* chosen from either the Department of Biology or one of the Basic Medical Sciences disciplines (see below).
Basic Medical Sciences Disciplines: Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Physiology, and Pharmacology. Courses in the History of Science are not included.
*Microbiology and Immunology 2100A or Pharmacology 2060A/B may be taken to satisfy this requirement.

Notes:
1. If students take Statistical Sciences 2035 or Psychology 2810 instead of Biology 2244A/B or Statistical Sciences 2244A/B or the former Statistical Sciences 2122A/B, the module becomes 6.5 courses.
2. Students registered in an honors double major degree must complete a minimum of 1.0 at the 3000 level for each module.
SPECIALIZATION IN BIOLOGY

Module
9.0 courses:
3.0 courses: Biochemistry 2280A, Biology 2290F/G, 2382B, 2483A, 2486A, 2581B.
0.5 course: Chemistry 2213A/B.
0.5 course: Biology 2601A/B, or the former Biology 2660A/B or 2672A/B
0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B, or the former Statistical Sciences 2122A/B. Students may substitute Statistical Sciences 2035 or Psychology 2810 for this 0.5 course.
4.5 courses at the 2200 level or above*, chosen from the Department of Biology and Basic Medical Sciences disciplines (see below), of which at least 3.5 courses must be chosen from the Department of Biology. A maximum of 1.0 course may be at the 2200-2999 level and at least 1.5 of these courses must have a laboratory component.
Basic Medical Sciences Disciplines: Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Physiology, and Pharmacology.
Courses in the History of Science are not acceptable.
*Microbiology and Immunology 2100A and/or Pharmacology 2060A/B may be taken to satisfy this requirement.

COMPUTER SCIENCE

Effective September 1, 2011, the following course will be introduced:

Computer Science 2033A/B - Multimedia and Communication II
This course continues the exploration of popular media and Internet technologies. Topics include making websites more interactive, more searchable and easier to update; digital marketing; e-commerce; social integration; and mobile applications. Students will practice concepts using industry standard tools and software.
Prerequisites(s): Computer Science 1033A/B
2 lecture hours, 2 laboratory/tutorial hours, 0.5 course.

Computer Science 2120A/B - Computing and Informatics for Life Sciences
Essential information processing skills for life science students. Includes core concepts of algorithms and data structures; creating programs and scripts to address problems that arise in applied research; examples of data sets and analyses drawn from different areas of life sciences. No previous programming background assumed.
Antirequisite(s): Computer Science 1025A/B or 1026A/B, Engineering Science 1036A/B, the former Computer Science 036A/B.
3 lecture hours, 2 laboratory/tutorial hours, 0.5 course.

Computer Science 2101A/B - Foundations of Programming for High Performance Computing
An introduction to fundamental programming skills in the context of High Performance Computing (HPC), exploring tools, techniques, and theory used in the creation of HPC applications for a wide variety of domains. Topics include data structures and algorithms for HPC, computer architectures, and applications. Suitable for non Computer Science students.
Antirequisite(s): Computer Science 1025A/B or 1026A/B, Engineering Science 1036A/B, the former Computer Science 036A/B.
3 lecture hours, 2 laboratory/tutorial hours, 0.5 course.

Computer Science 3101A/B: Theory and Practice of High Performance Computing
A comprehensive exploration of High Performance Computing (HPC), examining advanced theory and practice in the creation of HPC applications for a wide variety of domains. Topics include programming shared and distributed memory machines, multicores and manycore architectures, optimization techniques and performance analysis. Suitable for non Computer Science students.
Prerequisite(s): Computer Science 2101A/B or 2211A/B.
3 lecture hours, 1 laboratory/tutorial hours, 0.5 course.
Effective September 1, 2011, the following courses will be revised:

**Computer Science 1011A/B - The Internet: Behind the Curtain**
The technological successes that have led to the Internet's wide adoption for work and social purposes. The ways in which computer technology has led to more compact representation of data, and faster, more reliable and more secure communication. Intended primarily for students not in Computer Science.
Antirequisite(s): All Computer Science courses numbered 2100 or higher, and all former Computer Science courses numbered 200 to 499. Computer Science 2210A/B.
3 lecture hours, 0.5 course.

**Computer Science 1032A/B - Information Systems and Design**
Techniques used for determining technological needs of businesses; building and managing systems to meet those needs; development roles of individuals and organizations; planning and management of concepts, personnel and processes; related software tools (spreadsheets, databases). Intended primarily for Management and Organizational Studies students.
Antirequisite(s): Management and Organizational Studies 1033A/B, all Computer Science courses numbered 2100 or higher, all former Computer Science courses numbered 200 through 499, and the former Computer Science 031a/b.
3 lecture hours, 0.5 course.

**Computer Science 1033A/B - Multimedia and Communication I**
This course explores the use of different types of media (e.g., text, images, sound, animation) to convey ideas and facilitate interaction. Topics include the design and use of a range of software tools for media creation and editing, covering image, sound, animation and video. This knowledge will be applied to authoring websites.
Antirequisite(s): All Computer Science courses numbered 2100 or higher, and all former Computer Science courses numbered 200 to 499.
2 lecture hours, 2 laboratory/tutorial hours, 0.5 course.

**EARTH SCIENCES**

Effective September 1, 2011, the following course will be introduced:

**Earth Sciences 3372A/B - Introduction to Petroleum Systems**
The study of the fundamental geological components of petroleum systems responsible for oil and natural gas accumulations in sedimentary basins. The fate of organic matter is traced along a path from source rocks, maturation, migration, to reservoir, trap and seal. Labs incorporate use of industry software.
Prerequisite(s): Earth Sciences 2260A/B.
Antirequisite(s): The former Earth Sciences 4471A/B.
2 lecture hours, 3 laboratory hours, 0.5 course.

**Earth Sciences 4472A/B - Applied Petroleum Assessment**
Advanced-level study of characterization and quantitative assessment of petroleum plays and prospects, with an emphasis on the integration of Geoscience, introductory reservoir engineering and basic economic indicators on the valuation of oil and gas properties. Labs will analyze case studies using industry software.
Prerequisite(s): Earth Sciences 3372A/B, or permission of the Department.
Antirequisite(s): the former Earth Sciences 4471A/B.
2 lecture hours, 3 laboratory hours, 0.5 course.
Only offered in alternate years.

Effective September 1, 2011, the following courses will be withdrawn:

**Earth Sciences 4471A/B - Petroleum Geology**
Production and accumulation of organic matter, petroleum generation, primary migration of petroleum, secondary migration and accumulation of petroleum, petroleum alteration, reservoir rocks and traps, sedimentary basins and occurrence of petroleum traps.
Prerequisite(s): Earth Sciences 3314A/B or permission of the Department.
2 lecture hours, 3 seminar/laboratory hours, 0.5 course.
Effective September 1, 2011, the following courses will be revised:

Earth Sciences 1022A/B - Earth Rocks!
What our planet is made of, how it works, and how it affects us. Framed on the interactions of the lithosphere, hydrosphere, atmosphere and biosphere. Specific topics include: geological time and earth history; formation of rocks and minerals; rock deformation; volcanoes and earthquakes; plate tectonics and mountain building; natural resources.
Antirequisite(s): The former Earth Sciences 020, 082a/b.
2 lecture hours, 3 laboratory hours, 0.5 course.

Earth Sciences 1070A/B - Introduction to the Geology and Resources of Earth
An introduction to geology covering rock forming minerals and rock forming processes: Emphasis will be placed on how mineral and hydrocarbon resources develop. A survey of the geological record is carried out to illustrate how resources are classified and distributed through time.
Antirequisite(s): The former Earth Sciences 020.
Only available online, 0.5 course.
Purchase of Rock and Mineral Kit required.

Earth Sciences 1081A/B - Resources, Environment and Sustainability in a Material Society
This course introduces students to the relationship between humans and their geological environment. Emphasis is placed on the evidence for perturbations of Earth's natural environments by humans that impact on our planet's future. Specific topics include utilization of natural resources, waste management, water quality, geological hazards, and global change.
Antirequisite(s): The former Earth Sciences 020.
2 lecture hours, 3 laboratory hours, 0.5 course.

Earth Sciences 1083F/G - Life on Planet Earth
Antirequisite(s): The former Earth Sciences 020.
3 lecture hours, 1 tutorial hour, 0.5 course.

Earth Sciences 2206A/B - Mineral Systems, Crystallography, and Optics
Introduction to mineral chemistry, crystal chemistry and mineral paragenesis, with emphasis on rock-forming minerals and ore minerals. Identification of minerals and mineral properties in hand specimen and thin section.
Antirequisite(s): The former Earth Sciences 205a, 210.
Corequisite(s): Earth Sciences 2200A/B, or registration in a Materials Science module plus either Materials Science 2800 or Physics 2800.
2 lecture hours, 3 laboratory hours, 0.5 course.
Note: Grade 12 Chemistry or 0.5 course in Chemistry is recommended.

Earth Sciences 2220A/B - Environmental and Exploration Geophysics I
A brief introduction to applied seismology – the investigation of Earth structure using sound waves in rocks. Topics include: seismic reflection methods, a cornerstone of oil and gas exploration; seismic refraction methods; earthquake seismology. This lab-oriented course will provide hands-on experience with computers and analysis of large digital data sets.
Prerequisite(s): 0.5 course from Calculus 1000A/B or 1100A/B or 1500A/B, Mathematics 1225A/B.
2 lecture hours, 3 laboratory hours, 0.5 course.

Earth Sciences 2222A/B - Data Analysis and Signal Processing in the Sciences
An introduction to data analysis techniques, including but not limited to, filtering, interpolation techniques, transforms, and correlation analyses. A variety of applications from various fields will be used to illustrate these techniques, including earth sciences (seismology), economics (financial data), atmospheric sciences (climate change), medicine (electrocardiograms), and engineering (circuit analysis).
Antirequisite(s): The former Earth Sciences 322a/b.
Prerequisite(s): 4.0 course from Mathematics 1225A/B, 1228A/B, 1229A/B, Applied Mathematics 1411A/B, 1413, Calculus 1000A/B or 1100A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B. 0.5 course from Calculus 1000A/B, 1100A/B, 1500A/B or Mathematics 1225A/B; or Applied Mathematics 1413.
Pre-or Corequisite(s): 0.5 course from Calculus 1301A/B, 1501A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Mathematics 1228A/B, 1229A/B, 1600A/B or the former Linear Algebra 1600A/B, Statistical Sciences 1024A/B.
2 lecture hours, 3 laboratory hours, 0.5 course.

Earth Sciences 2266F/G - Dinosaur and other Vertebrate Evolution
Introduction to the fossil record that documents the major steps in vertebrate evolution, including the origin and radiation of fishes, amphibians, mammal-like reptiles, dinosaurs, birds, and mammals.
Prerequisite(s): Completion of first-year requirements, and registration in a Geology Earth Sciences, Biology, or Anthropology module.
3 lecture hours, 0.5 course.

Earth Sciences 3313A/B - Igneous Petrology
Study of igneous processes using rock and thin section descriptions (petrography). Discussion of how different compositions and conditions influence the phases present in a rock (phase equilibria). Association of different rock types with plate tectonic setting.
Antirequisite(s): The former Earth Sciences 311 and 312a.
Prerequisite(s): Earth Sciences 2206A/B.
2 lecture hours, 3 laboratory hours, 0.5 course.

Earth Sciences 3320A/B - Environmental and Exploration Geophysics II
An advanced course covering the geophysical techniques used for subsurface sensing, with applications to environmental studies and resource exploration. Data analysis includes seismology, gravity, electromagnetic and radiometric applications.
Antirequisite(s): The former Earth Sciences 320a/b.
Prerequisite(s): At least 0.5 course from Mathematics 1225A/B, Applied Mathematics 1411A/B or 1413, Calculus 1000A/B or 1100A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B Earth Sciences 2220A/B.
Pre-or Corequisite(s): Earth Sciences 2220A/B.
2 lecture hours, 3 laboratory hours, 0.5 course.

Earth Sciences 3340A/B - Watershed Hydrology
Occurrence, movement, and behavior of water in the hydrologic cycle. The development of quantitative representations of hydrologic processes (e.g., precipitation, evapotranspiration, runoff, infiltration and unsaturated flow, saturated flow, surface flow). Analysis of stream response hydrographs. Statistical models of predicting flood responses and water resource management.
Prerequisite(s): 1.0 course from Mathematics 1225A/B, 1228A/B, 1229A/B or the former Mathematics 030, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1411A/B, 1413, Calculus 1000A/B or 1100A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, or Statistical Sciences 1023A/B, 1024A/B; or permission of the Department. Any 1.0 course equivalent at the 1000 level from Calculus, Mathematics, Applied Mathematics, or Statistical Sciences, or the former Linear Algebra 1600A/B.
2 lecture hours, 2 laboratory hours, 0.5 course.

Earth Sciences 4431A/B - Isotope Geochemistry in Earth and Environmental Science
Prerequisite(s): Earth Sciences 2230A/B or 3341A/B or the former Earth Sciences 330b and completion of any 2000 level half course in Chemistry; or registration in third or fourth year of an Environmental Sciences module; or permission of the Department.
3 lecture hours, 0.5 course.

Earth Sciences 4432A/B - Geochemistry of Metals, Melts and Fluids in the Crust
The principals of metal concentration and deposition in magmatic and hydrothermal environments are examined. Natural and experimental data, including fluid inclusion, stable isotope, metal solubility, mineral stability and metal partition behaviour are used to develop genetic models for ore deposits, which form the basis of mineral exploration strategies.
Prerequisite(s): Earth Sciences 2230A/B and 3370A/B.
3 lecture hours, 1 tutorial hour, 0.5 course.

**Earth Sciences 4451Y** - Geophysical Field Techniques

An introduction to geophysical techniques used for environment studies, as well as exploration for mineral deposits and hydrocarbons. Techniques covered will include gravity, magnetic, seismic and electromagnetic field methods. Data acquisition and basic data processing and interpretation will be covered, together with an introduction to data analysis using MATLAB. An off-campus Geophysical field school providing an introduction to geophysical techniques, including gravity, magnetic, seismic and electromagnetic methods. Classroom lectures, with accompanying outdoor sessions and field exercises. Offered in co-operation with other Universities, with participation from geophysical contractors. The course meets professional registration requirements for Field Techniques (Geophysics).

Prerequisite(s): Earth Sciences 2220A/B, or the former Earth Sciences 320a/b, or permission of the Department.

Antirequisite(s): The former Earth Sciences 4451Y

Approximately one week of field camp plus on-campus lectures and report writing, 0.5 course.

Notes: The course is taught during the fall term, with lectures and laboratories held in the first four weeks of term, followed by a week of field camp, and follow-up lectures and labs focused on delivering a comprehensive final report by the end of term. The course is to be offered in co-operation with other institutions, including Queen’s University, with possible participation of one or two geophysical contractors on-site. UWO students enrolled in the Specialization or Honors Specialization in Geophysics are partially subsidized by the Department. However, all students are expected to contribute toward transportation, lodging and equipment rental costs (currently estimated at $450). Students must inform the Department of their intention to register in the course prior to May 1st, and register prior to August 15th. Partial cost of the field course must be borne by the student, and is payable to the Department by May 1st. The cost per student is subsidized by the Department, and is $650 for full-time students in 2011.

*Effective September 1, 2011, the following modules will be revised:*

**HONORS SPECIALIZATION IN GEOLOGY**

**Module**

10.0 courses:


1.0 additional course in Earth Sciences at the 3000 level or above.

1.0 course: Earth Sciences 4490E with a mark of at least 70%.

Note: Earth Sciences 2123A/B should be taken by the end of the second year. If Earth Sciences 1023A/B has been taken, Earth Sciences 2123A/B cannot be taken, and one additional 2000-level or above Earth Sciences course not required for the module must be taken as a substitute.

**SPECIALIZATION IN GEOLOGY**

**Module**

9.0 courses:


1.0 additional course in Earth Sciences at the 3000 level or above.

Note: Earth Sciences 2123A/B should be taken by the end of second year. If Earth Sciences 1023A/B has been taken, Earth Sciences 2123A/B cannot be taken, and one additional 2000-level or above Earth Sciences course not required for the module must be taken as a substitute.
HONORS GEOLOGY PROGRAM - For Professional Registration

Common 1st Year

Required Courses 2nd Year
5.5 courses (overload due to field course Earth Sciences 2250Y):

4.0 courses: Earth Sciences 2200A/B, 2201A/B, 2206A/B, 2220A/B, 2230A/B, 2250Y, 2260A/B, 2265A/B.
0.5 course from category A or category B.

Required Courses 3rd Year
5.0 courses:

2.5 2.0 courses: Earth Sciences 3313A/B, 3314A/B, 3315A/B, 3350Y, 3370A/B.
4.5 2.0 courses from the Additional Geoscience Courses listed below.
1.0 course from the Open Course list below.

Required Courses 4th Year
5.0 courses:

2.5 2.0 courses: Earth Sciences 4400A/B, 4450Y, 4462A/B, 4490E.
4.5 2.0 courses from the Additional Geoscience Courses listed below.
1.0 course from Open Course list below.

Lists of additional courses required in 3rd or 4th year:

Open Course list: At least 1.0 at a senior level; the following are recommended for additional Geoscience background, but are not required: Earth Sciences 2266F/G, 3369A/B, 4440A/B, 4470A/B, 4471A/B; Geography 2230A/B, 2310A/B, 2330A/B.

Note: Geography courses will count towards your category A breadth requirement.

HONORS GEOPHYSICS PROGRAM - For Professional Registration

Common 1st Year

Required Courses 2nd Year
5.0 courses:

4.0 courses: Earth Sciences 2123A/B, 2200A/B, 2201A/B, 2206A/B, 2220A/B, 2222A/B, 2250Y, 2260A/B.
1.0 course from category A or category B.

Required Courses to be completed in 3rd or 4th Year
10.0 courses:

2.0 courses of which at least 1.0 is at a senior level.
Notes:

1. Geography courses will count towards your category A breadth requirement. If Earth Sciences 1023A/B has been taken, Earth Sciences 2123A/B cannot be taken, and one additional 2000-level or above Earth Sciences course not otherwise required for the module must be taken as a substitute.

2. Prerequisites: Calculus 1301A/B or equivalent, Calculus 2302A/B and 2303A/B or equivalent, are required prerequisites for Earth Sciences 3323A/B, 4420A/B, 4423A/B, and 4424A/B.

**HONORS ENVIRONMENTAL GEOSCIENCE PROGRAM - For Professional Registration**

**Common 1st Year**

**Required Courses 2nd Year**

5.5 courses: (overload due to field course Earth Sciences 2250Y)
4.0 courses: Earth Sciences 2200A/B, 2201A/B, 2206A/B, 2220A/B, 2230A/B, 2250Y, 2260A/B, 2265A/B.
0.5 course from category A or category B.

**Required Courses 3rd Year**

5.0 courses:
4.0 courses: Earth Sciences 3313A/B, 3314A/B, 3315A/B, 3340A/B, 3341A/B, 3350Y, 3370A/B; Geography 2330A/B.
1.0 course from the Open Course list below.

**Required Courses 4th Year**

5.0 courses:
2.5 courses: Earth Sciences 3369A/B, 4440A/B, 4462A/B, 4490E.
0.5 course from: Geography 3350A/B or 3352A/B.
1.0 course from the Additional Earth Sciences Courses listed below
1.0 course from the Open Course list below.

**Lists of additional courses required in 3rd or 4th year:**
1.0 course from: Earth Sciences 3310A/B, 3371A/B, 3372A/B, 4400A/B, 4431A/B, 4432A/B, 4460A/B.
Open Course list: At least 1.0 is at a senior level; the following are recommended for additional Geoscience background but are not required: Earth Sciences 2266F/G, 3321A/B, 3369A/B, 4450Y, 4470A/B, 4471A/B, 4472A/B.

**MEDICAL BIOPHYSICS**

*Effective September 1, 2011, the following course will be introduced:*

**Medical Biophysics 4971E - Research Project in Biophysics (Clinical Physics Concentration)**

Major laboratory course in experimental biophysics for fourth-year Honors Specialization Medical Biophysics (Clinical Physics Concentration). The three components are: a major experimental project related to Clinical Physics (topic and advisor chosen in consultation with the student), scientific communication (student presentation and reports), and electronic information processing (data capture, computer analysis of biophysical signals).

Antirequisite(s): Medical Biophysics 4970E.
Prerequisite(s): Medical Biophysics 3970Z and registration in Year 4 of an Honors Specialization in Medical Biophysics (Clinical Physics Concentration).
15 hours weekly on average, 1.5 course.
Effective September 1, 2011, the following course will be revised:

Medical Biophysics 4970E - Research Projects in Biophysics
Major laboratory course in experimental biophysics for fourth-year Honors Specialization Medical Biophysics. The three components are: a major experimental project (topic and advisor chosen in consultation with the student), scientific communication (student presentation and reports), and electronic information processing (data capture, computer analysis of biophysical signals).
Prerequisite(s): Medical Biophysics 3970Z and registration in Year 4 of an Honors Specialization offered by the Department of Medical Biophysics.
15 hours weekly on average, 1.5 course.

Effective September 1, 2011, the following course will be withdrawn:

Medicine 210

Effective September 1, 2011, the following courses will be introduced:

Pharmacology 4350A/B - Clinical Pharmacology
Clinical pharmacology is a scientific and medical discipline dedicated to the bench-to-bedside study of drug action through an in-depth knowledge of human pharmacology and therapeutics. This course in clinical pharmacology focuses on fundamental concepts highlighted with examples from clinical cases, therapeutic applications and relevance to drug discovery and development.
Prerequisite(s): Pharmacology 3620, or the former Pharmacology 3550A/B and 3560A/B.
2 lecture hours, 0.5 course.

Pharmacology 4370A/B - The Pharmacology of Drugs of Abuse
This course will cover the pharmacological and pathophysiological effects of non-medicinal drug use including mechanisms of action, tolerance and addiction, long-term effects, side effects and toxicity, treatment of addictions and overdoses. Pharmacokinetics will also be examined including routes of administration, activation, deactivation, elimination, and drug-drug interactions.
Prerequisite(s): Pharmacology 3620, or the former Pharmacology 3550A/B and 3560A/B; Physiology 3140A.
2 lecture hours, 0.5 course.

Physiology 4530A/B - Biological Bases of Skeletal Health and Disease
This course will provide an overview of the development and biology of skeletal tissues, introduce current techniques used to study skeletal physiology and examine the biological bases of common musculoskeletal diseases and their treatments.
Prerequisite(s): Physiology 3120, 3130Y and Physiology 3140A; or Physiology 3120 (with a mark of at least 75%) and Physiology 3140A.
2 lecture hours, 1 tutorial hour, 0.5 course.

Effective September 1, 2011, the following courses will be revised:

Pharmacology 2060A/B - Introductory Pharmacology and Therapeutics
A course for students in the BSc in Nursing and other Health Sciences programs as well as students in BMSc and BSc programs, to provide a basic understanding of the fundamentals of drug action and the mechanisms of action and therapeutic use of the important classes of drugs.
Antirequisite(s): Pharmacology 3620, the former Pharmacology 3550A/B.
Pre-or Corequisite(s): Biochemistry 2280A and either Chemistry 2213A/B or 2273A, One of Biology 1001A or 1201A and one of Biology 1002B or 1202B, or the former Biology 1222 or 1223; or registration in the BSc in Nursing.
1 tutorial hour (optional), 0.5 course. Only offered on-line (Distance Studies).
Pharmacology 4620A - Molecular Mechanisms of Drug Action
This course is focused on the molecular mechanisms underlying the biological effects of drugs. Content includes: i) advanced drug-receptor theory, ii) theoretical models used to predict drug effects, and iii) chemical structure-activity relationships and modern receptor structure-function analyses as they relate to drug action.
Prerequisite(s): Pharmacology 3620, or the former Pharmacology 3550A/B and 3560A/B, or Biochemistry 3381A; or permission of the Department.
2 lecture hours, 0.5 course.

FACULTY OF SOCIAL SCIENCE

GEOGRAPHY

Effective September 1, 2011, the following course will be introduced:

Geography 2041F/G - Geography of China
This course adopts a geographic approach to understanding contemporary China. It examines how transformations of China’s land, people, economy, and society are recasting internal regional divisions and repositioning China in a rapidly changing world.
2 lecture hours, 1 tutorial hour, 0.5 course.

Effective September 1, 2011, the following course will be revised:

Geography 3900 - Internship
Preparatory workshops and an 8-16 month placement with a government, private sector or non-governmental organization to acquire professional learning experience. Following the internship, students will produce a written report and do an oral presentation on work undertaken during the internship.
Prerequisite(s): Completion of second year of a Geography Honors program with a minimum average of 70%. Participation in preparatory workshops.
Non-credit, 3.0 course. Pass/Fail.
Notes: This credit cannot be included in the number of courses counted towards any degree or program.
• Successful completion of Geography 3900 will be recognized on a student's transcript.
• International students are not permitted to register in this course unless they are able to secure an internship placement in a jurisdiction where they may legally be employed. International students may participate in this course provided they find an Internship placement in a jurisdiction where they are legally permitted to work.

HISTORY

Effective September 1, 2011, the following courses will be revised:

History 1401E - Modern Europe, 1715 to the Present: Conflict and Transformation
Analysis of the evolutionary and revolutionary development of Modern Europe, with intensive treatment of the great landmarks in the formation of Western society and culture. Examines central events and themes of modern European history, including: origins and impact of the French and industrial revolutions; Napoleonic wars; liberalism and reaction; socialism; nationalism; women's emancipation movements; imperialism, national rivalries and world wars; the Russian Revolution, Communist rule, and the collapse of the Soviet Union; Nazism; European integration.
3.0 hours, 1.0 course.

History 2121: Building Modern Canada, 1845-1945
This course examines Canada’s dramatic transformation from a rural-agrarian to an urban-industrial nation. Lectures focus on the economic, technological and social forces that created modern Canada.
2.0 lecture hours, 1.0 course.

History 3301E - Colonial British America
Seminars in selected areas from the Elizabethan colonization through the American Revolution. Seminar on British exploration and settlement of America, imperial rivalries with other European empires, relations with Native Americans, free and enslaved migration to America, the development and diversity of colonial American societies, British imperial integration, the American Revolution, and the formation of the United States. Covers 1550 to 1800.
Prerequisite(s): 1.0 course in History at the 2200 level or above.
3 hours, 1.0 course.

Note: The Affiliate like course will be revised to match this course.

**History 3601E - History of Modern China**
Chinese Nationalism in History
A thematic exploration of the crucial developments and problems in Chinese history since 1800.
Prerequisites: 1.0 course in History at the 2200 level or above.
3 seminar hours, 1.0 course.

**PSYCHOLOGY**

*Effective September 1, 2011, the following courses will be revised:*

**Psychology 2810 - Statistics for Psychology**
Introduction to data analysis with particular reference to statistical procedures commonly used in Psychological research.
Prerequisite(s): At least 60% in a 1000-level Psychology course plus one full course in mathematics. To fulfill the mathematics requirement, you must complete a full course equivalent by taking 1.0 courses from among the following courses:
One full course in mathematics plus at least 60% in a 1000-level Psychology course. To fulfill the mathematics requirement, you must complete a full course equivalent by taking 1.0 courses from among the following courses: Applied Mathematics 1201A/B or the former Calculus 1201A/B, Mathematics 0110A/B, 1120A/B, 1225A/B, 1228A/B, 1229A/B, 1600A/B, Calculus 1000A/B, 1100A/B, 1301A/B, 1500A/B, 1501A/B, the former Linear Algebra 1600A/B, Statistical Sciences 1024A/B, former Mathematics 030 and 031. If Mathematics 0110A/B is selected, then either Statistical Sciences 1024A/B or Mathematics 1228A/B must be taken. The combination of Mathematics 1228A/B and Statistical Sciences 1024A/B is strongly recommended.
2 lecture hours, 2 laboratory hours, 1.0 course.

**Psychology 2820E - Research Methods and Statistical Analysis in Psychology**
An introduction to the design, conduct, and statistical analyses of psychological research. The intent is to provide students with knowledge of how to implement and evaluate research in both laboratory and applied settings. Design and statistical analysis will be taught in the context of specific studies and data sets from correlational, experimental, quasi-experimental and qualitative research. Written research projects will be required.
Prerequisite(s): At least 60% in a 1000-level Psychology course plus one full course in mathematics. To fulfill the mathematics requirement, you must complete a full course equivalent by taking 1.0 course from:
One full course in mathematics plus at least 60% in a 1000-level Psychology course. To fulfill the mathematics requirement, you must complete a full course equivalent by taking 1.0 courses from among the following courses: Applied Mathematics 1201A/B or the former Calculus 1201A/B, Mathematics 0110A/B, 1120A/B, 1225A/B, 1228A/B, 1229A/B, 1600A/B, Calculus 1000A/B, 1100A/B, 1301A/B, 1500A/B, 1501A/B, the former Linear Algebra 1600A/B, Statistical Sciences 1024A/B, former Mathematics 030 and 031. If Mathematics 0110A/B is selected, then either Statistical Sciences 1024A/B or Mathematics 1228A/B must be taken. The combination of Mathematics 1228A/B and Statistical Sciences 1024A/B is strongly recommended.
2 lecture hours, 2 laboratory/tutorial hours, 1.0 course.
Religious Studies 2400F/G - Hebrew Bible 1: Pentateuch and Deuteronomistic History
A critical, historical, and literary survey of the Pentateuch and the books of Joshua, Judges, Samuel, and Kings.
3 hours, 0.5 course.
(Huron)

Religious Studies 2410F/G- Hebrew Bible 2: Prophets and Writings
A critical, historical, and literary survey of the major prophets, the twelve minor prophets, and the books of the Hebrew Bible often referred to as the Writings.
Prerequisite(s): RS 2400F/G – Hebrew Bible 1: Pentateuch and Deuteronomistic History.
3 hours, 0.5 course.
(Huron)

Religious Studies 2620F/G - Islamic Thought, Culture and Practices
A survey of Islamic history, thought, culture and practices, this course considers the development of Islam, key historical events, the Qur'an and its interpretive traditions, Islamic philosophy, devotional and altruistic practices, Muslim identity in a variety of local and global settings, and contemporary issues.
Antirequisites: Religious Studies 2285F/G, Religious Studies 2503F/G.
3.0 lecture hours, 0.5 course.
(Huron)

Religious Studies 2700F/G - Sociology and Anthropology of Religion
This course surveys studies of religion within the disciplines of sociology and anthropology. In the course of covering methodologies, major figures, concepts and categories, particular attention will be given to time, space, structure, ritual, the sacred, practice, identity, and meaning as observed in historical and contemporary religious communities.
3.0 hours, 0.5 course.
(Huron)

Religious Studies 2705F/G - The History of Religion
This course surveys the diverse ways that religion has been defined and understood throughout history, from late antiquity to the present. In addition to comparing different religious and historical contexts, particular attention will be paid to significant historical writings on phenomena, practices, and populations in the religions of the world.
3.0 hours, 0.5 course.
(Huron)

Religious Studies 2715F/G - Body, Religion and the Sacred
This course will examine how religious concepts of the body interact with contemporary conceptions of gender, tradition, culture and sexuality. The course will look at art, movement, liturgy and ritual, as well as medicine, science, and philosophy.
Antirequisites: Religious Studies 2222F/G.
3.0 hours, 0.5 course.
(Huron)

Religious Studies 2725F/G - Ritual Studies
Introduction to the interdisciplinary study of ritual in religious practice. Students will be introduced to the analytic tools provided in ritual studies, drawing on sociological, anthropological, and performance theory. They will apply these principles to a ritual practice in field analysis, group work, and formal writing and presentations.
3.0 hours, 0.5 course.
(Huron)
**Religious Studies 2730F/G - Sacred Matter: Religion and Material Culture**
An introduction to contemporary material culture theory and its application to the study of religious practices using critical readings, case studies, group work, and formal academic presentations and writing. Topics include: icons and iconoclasm; sacred books; religious vesture; objects for personal devotion.
3.0 hours, 0.5 course.
(Huron)

**Religious Studies 3070F/G - Studies in the Gospels**
The composition and distinctive emphases of the four canonical Gospels and their sources, and of other early Christian gospels.
Antirequisites: Religious Studies 2212F/G; Religious Studies 2227F/G.
Prerequisite: Religious Studies 2124F/G or permission of instructor.
3 hours, 0.5 course.
(Huron)

**Religious Studies 3080F/G - The Death and Resurrection of Jesus**
a historical, literary, and theological study of the Gospel Passion Narratives and the traditions and narratives about the resurrection of Jesus.
Antirequisite: The former Theological Studies 3301F/G.
Prerequisite: Religious Studies 2124F/G or permission of instructor.
3 hours, 0.5 course.
(Huron)

**Religious Studies 3090F/G - The Major Letters of Paul**
The composition and theology of Paul’s letters to the Romans, Corinthians, and Galatians, in their historical setting.
Antirequisites: The former Theological Studies 4403F/G; Religious Studies 2211F/G.
Prerequisite: Religious Studies 2124F/G or permission of instructor.
3 hours, 0.5 course.
(Huron)

**Religious Studies 3100F/G - Studies in the Qur'an, Sunnah and Hadith**
This course examines the Qur'an in the interpretative traditions in the Sunnah (the sayings and practices of Mohammed) and the Hadith (narrations concerning Mohammed, his companions, and his successors), with attention to the role these interpretations play in the branches of Islam, Islamic jurisprudence, and contemporary Muslim life.
Prerequisites: Religious Studies 2310F/G or Religious Studies 2500F/G or permission of the Instructor.
3 hours, 0.5 course.
(Huron)

**Religious Studies 3110F/G - Classical Islamic Thought**
This course surveys classical theological, philosophical, mystical, and exegetical traditions within Islam and their implications for contemporary thought, life and practice. Particular attention will be paid to the strategies for drawing from religious traditions to construct religious identity and practice in a multicultural context.
Antirequisite: Religious Studies 2503F/G.
3 hours, 0.5 course.
(Huron)

**Religious Studies 3120F/G - Medieval Islamic Thought**
This course examines Islamic philosophy and theology in the 11th through the 14th centuries, focusing on Al-Ghazali, Ibn Rushd (Averroës), their contemporaries, and their interlocutors. In addition to focusing on main categories, concepts, and methodologies, the course will survey more recent attempts to continue this tradition in the present.
Prerequisites: Religious Studies 3110F/G or permission of the instructor.
3 hours, 0.5 course.
(Huron)

**Religious Studies 4040F/G - Prophetic Literature**
Studies focused on one or more of the major or minor prophets.
Antirequisite: RS 2213 F/G.
Prerequisite: RS 2410 F/G or permission of the instructor.
3 hours, 0.5 course.
(Huron)

THEOLOGICAL STUDIES

Effective September 1, 2011, the following course will be introduced:

Theological Studies 3240F/G - Missiology
A study of major texts, issues and movements in modern missiology, with attention to the nature of mission and to historical, contemporary and global models of evangelism, witness and action. Authors such as David Bosch will be studied alongside ecumenical texts and movements such as the anti-slavery and anti-Apartheid struggles.
Prerequisites: Theological Studies 2207F/G and 2208F/G.
3.0 hours, 0.5 course.
(Huron)

Effective September 1, 2011, the following courses will be withdrawn:

Theological Studies 2200F/G - Elements of Biblical Exegesis
An introduction to the use of critical methodology in the study of Scripture and to the two chief biblical languages. Students will become familiar with the standard tools of exegesis and will exegete selected passages from the Bible.
Antirequisite(s): Biblical Studies 5103A.
3 hours, 0.5 course.
(Huron)

Theological Studies 2206F/G - New Testament Exegesis
Exegetical study of selected passages from the gospels of Mark and John with particular attention to their historical setting and theological emphases.
Antirequisite(s): Biblical Studies 5106B.
Prerequisite(s): Theological Studies 2200F/G.
2 hours, 0.5 course.
(Huron)

Theological Studies 2230F/G - Introduction to the New Testament
An introduction to the history, literature and thought of primitive Christianity.
Antirequisite(s): Religious Studies 2102A/B, 2124F/G, 2202F/G.
3 hours, 0.5 course.
(Huron)

Theological Studies 3301F/G - Passion and Resurrection Narratives
A historical, literary, and theological study of the Gospel Passion narratives and the narratives and traditions about the resurrection of Jesus.
Antirequisite(s): Biblical Studies 5225A/B.
Prerequisite(s): Theological Studies 2200F/G and 2206F/G.
2 hours, 0.5 course.
(Huron)

Theological Studies 4403F/G - Major Pauline Epistles
The theology of Paul’s Letters to the Romans, Corinthians and Galatians in its historical setting.
Antirequisite(s): Biblical Studies 5205A/B, Religious Studies 2121F/G, 2211F/G.
Prerequisite(s): Theological Studies 2200F/G and 2206F/G.
2 hours, 0.5 course.
(Huron)
Effective September 1, 2011, the following modules will be revised:

**HONORS SPECIALIZATION IN PHILOSOPHY**

**Admission Requirements**
Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark in these principal courses below 60%. 1.0 course from Philosophy 1150E, 1300E, 1360E, 1901E or 1361E is recommended.

**HONORS SPECIALIZATION IN CONTINENTAL PHILOSOPHY**

**Admission Requirements**
Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark in these principal courses below 60%. 1.0 course from Philosophy 1150E, 1300E, 1360E, 1901E or 1361E is recommended.

**HONORS SPECIALIZATION IN PHILOSOPHY AND RELIGION**

**Admission Requirements**
Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark in these principal courses below 60%. 1.0 course from Philosophy 1150E, 1300E, 1360E, 1901E or 1361E is recommended.

**MAJOR IN PHILOSOPHY**

**Admission Requirements**
Completion of first-year requirements. 1.0 course from Philosophy 1150E, 1300E, 1360E, 1901E or 1361E is recommended.

**MAJOR IN CONTINENTAL PHILOSOPHY**

**Admission Requirements**
Completion of first-year requirements. 1.0 course from Philosophy 1150E, 1300E, 1360E, 1901E or 1361E is recommended.

**MAJOR IN PHILOSOPHY AND RELIGION**

**Admission Requirements**
Completion of first-year requirements. 1.0 course from Philosophy 1150E, 1300E, 1360E, 1901E or 1361E is recommended.

**SPECIALIZATION IN PHILOSOPHY**

**Admission Requirements**
Completion of first-year requirements, including 3.0 courses with a mark of at least 60%. 1.0 course from Philosophy 1150E, 1300E, 1360E, 1901E or 1361E is recommended.

Note: Students taking a double Major and thinking of applying to graduate school are strongly advised to take Philosophy 2254A/B: Introduction to Logic

**REGISTRAR’S UPDATE**

**MEDIA, THEORY AND PRODUCTION**

Effective September 1, 2011, the following program will be revised:
WESTERN/FANSHAWE COLLABORATIVE DEGREE/DIPLOMA IN MEDIA THEORY AND PRODUCTION

Multimedia Design and Production Interactive Design and Production
First Year
Completion of all first year requirements with no failures. Students must have an average of at least 68% on 5.0 courses with a mark of at least 65% in each of Media, Information and Technoculture 1200F/G, 1500F/G, 1700F/G and Writing 2121F/G. At least 1.0 course must be selected from the Faculty of Arts and Humanities or the Faculty of Science.
Second Year
MIT 2000F/G, 2100F/G.
Fanshawe Courses: MMED 1001, MMED 1002, MMED 1003, MMED 1004, MMED 1005, MMED 1006, MMED 1007, MMED 1008
Third Year
MIT 2200F/G, 2500A/B.
2.0 MIT courses at the 2000 level or above.
1.0 option (must be selected from a subject area other than MIT).
Fanshawe Courses: MMED 1015 and MMED 3010.
Fourth Year
1.0 MIT course at the 2000 level or above.
Fanshawe Courses: MMED 1012, MMED 3001, MMED 3002, MMED 3003, MMED 3005, MMED 3006, MMED 3007, MMED 3008, MMED 3009.

MANAGEMENT AND ORGANIZATIONAL STUDIES

Effective September 1, 2011, the following course will be revised:

Management and Organizational Studies 4312A/B - Derivatives
This course provides students with a framework for understanding the design and valuation of derivative securities. It familiarizes them with the instruments and institutions of financial markets, focusing particularly on "derivatives" markets (futures, options, etc.). Students learn with a series of simulation exercises in excel spreadsheet using real data.
Antirequisite(s): MOS 3312A/B and MOS 4497A/B if taken prior to September 2011.
Prerequisite(s): MOS 2310A/B or MOS 3310A/B and enrollment in 4th year of BMOS.
3.4 lecture hours, 0.5 course.

RELIGIOUS STUDIES

Effective September 1, 2011, the following course will be revised:

Religious Studies 2310F/G - Interpreting the Qur'an Qur'an (in translation)
This course explores passages in the Qur'an that have shaped classical and contemporary Islam, particularly regarding the tensions between text, context, and community. In addition to textual analysis, the course covers the history of reception and the influence these texts and their interpretations have on social relations and contemporary issues.
3 lecture hours, 0.5 course.
(Huron)