The following proposals, received on DAP between June 1-15, 2010, have now been approved.
For more information on the DAP process see the Academic Handbook at http://www.uwo.ca/univsec/handbook

---

FACULTY OF ARTS AND HUMANITIES

FRENCH

*Effective **September 1, 2010,** the Departments of French Studies on Main Campus and the three Affiliate Colleges are to change the prerequisite of French 1010 and French 1910/1900E so that they confirm the relevant high school French course prerequisite (Grade 11 French for French 1010, and Grade 12 French for 1900E/1910). The students who meet these requirements will not have to take a placement test to enroll in these courses.*

French 1010 - Intermediate French
Grammar review, composition, translation, oral practice. (One hour per week in the language laboratory may be required.) Note that students who have successfully completed Grade 12 French or equivalent cannot take this course for credit.
Antirequisite(s): French 1101, Ontario Grade 12 French (Core, Extended or Immersion) or equivalent.
Prerequisite(s): Ontario Grade 11 French (Core, Extended or Immersion) or equivalent, French 1002 or permission of the Department of French Studies.
3 or 4 tutorial hours, 1.0 course.
NOTE: Students who have Grade 11 French but have not taken French courses for more than 3 years, or have an average below 75% in Grade 11 French, should consult the Department of French Studies.

French 1900E - French Language and Literature
This is the basic first-year course in French, providing training in language and literary studies.
Antirequisite(s): French 1910.
Prerequisite(s): Prerequisite(s): Ontario Grade 12 French (Core, Extended or Immersion) or equivalent, or French 1010 or permission of the Department of French Studies.
4 tutorial/laboratory hours, 1.0 course.
NOTE: Students who have Grade 12 French but have not taken French courses for more than 3 years, or have an average below 75% in Grade 12 French, should consult the Department of French Studies.

French 1910 - University French (Level I)
A study of the French language based on cultural, written material and basic grammar problems.
Antirequisite(s): French 1900E.
Prerequisite(s): Ontario Grade 12 French (Core, Extended, Immersion) or equivalent or French 1010 or permission of the Department of French Studies. 4 tutorial/laboratory hours, 1.0 course.
NOTE: Students who have Grade 12 French but have not taken French courses for more than 3 years, or have an average below 75% in Grade 12 French, should consult the Department of French Studies.

VISUAL ARTS

*Effective, **March 1, 2010** a two new courses will be introduced and one will be withdrawn for Introduction to Gallery Practices in the Visual Arts Department.*

To be introduced:

VAH 3384 and VAS 3384 Introduction to Gallery Practices
This course examines practical and theoretical aspects of contemporary art and its presentation in the gallery environment. Students will gain gallery and curatorial experience through research, planning, written assignments, presentations, and the realization of an exhibition project in the Artlab Gallery.
Antirequisite(s): The former VAS2285 or the former VAH2285 or the former VAS3387.
Prerequisite(s): at least one 2200 level VAS or VAH course 4 seminar/studio hours, 1.0 course.

To be withdrawn:

VAS 3387.

FACULTY OF EDUCATION

EDUCATION

*That effective **September 1, 2010,** a new elective, EDUC 5443Q/S Teaching Environmental Science, Grades 1 to 8, be introduced by the Faculty of Education.*

EDUC 5443Q/S Teaching Environmental Science
An introduction to basic concepts in environmental science, to the integration of environmental science in a variety of subject areas in the elementary school curriculum, and to methods and materials for teaching about the environment, for the environment, in the environment.
Two hours per week. .25 credit. *Offered first or second term.*

*That effective **September 1, 2010,** a new elective, EDUC 5445Q/S Teaching Environmental Science, Grades 9 to 12 be introduced by the Faculty of Education.*

EDUC 5445Q/S Teaching Environmental Science
An introduction to basic concepts in environmental science and to the integration of environmental science with subject areas in the elementary school curriculum. Strategies, resources, and materials for teaching about the environment, for the environment, in the environment, are emphasized.
Two hours per week. .25 credit. Offered first or second term.

FACULTY OF ENGINEERING

CHEMICAL AND BIOCHEMICAL ENGINEERING

*Effective **September 1, 2010,** to correct the prerequisites for this course by moving CBE 2220A/B from a corequisite to a prerequisite.*

Chemical and Biochemical Engineering 3324A/B – Mass Transfer Operations
This course reviews the fundamentals of interphase mass transfer and transfer units and then reviews the design of differential mass transfer equipment, with special emphasis on absorption, stripping, humidification and drying.
Prerequisite(s): CBE 2221A/B, CBE 2220A/B
3 lecture hours, 2 laboratory hours, 1 tutorial hour, 0.5 course.

*Effective **September 1, 2010,** to include CBE 4409A/B as a prerequisite for CBE 4463A/B.*

Chemical and Biochemical Engineering 4463A/B – Water Pollution Design
Design problems on specific pollution topics are undertaken and completed. Topics selected are activated sludge, trickling filters, oxidation ponds, anaerobic digestion, composting, solvent extraction, flotation, settlers and clarifiers, incineration, chemical treatment, e.g. flocculation, coagulation, ozonation or chlorination.
Prerequisite(s): CBE 4409A/B or the former CBE 3363A/B
3 lecture hours, 1 tutorial hour, 0.5 course.

GREEN PROCESS ENGINEERING

*Effective **September 1, 2010**, to include ECE 2238A/B as a prerequisite for GPE 3382A/B*

Green Process Engineering 3382A/B – Fundamentals of Green Engineering
This course reviews the fundamental concepts of Green Engineering. The general objectives are for the student to be aware of the environmental issues associated with industrial processes, environmental laws and regulations and be able to evaluate the global environmental footprint of an industrial process.
Antirequisite(s): CBE 4467A/B.

Prerequisite(s): CBE 2207A/B or GPE 2214A/B, CBE 2224A/B or GPE 2218A/B, ECE 2208A/B or ECE 2238A/B
Corequisite(s): CBE 3317A/B.
3 lecture hours, 1 tutorial hour, 0.5 course

SCHULICH SCHOOL OF MEDICINE & DENTISTRY

ANATOMY AND CELL BIOLOGY

*That effective **September 1, 2010,** the Admission Requirements for the modules offered by the Department of Anatomy and Cell Biology be revised to accommodate the withdrawal of Biology 1222 and 1223, Chemistry 1050, Linear Algebra 1600A/B, and Physics 1020 and 1024, and the introduction of Biology 1001A, 1002B, 1201A, and 1202B, Chemistry 1100A/B and 1200B, Mathematics 1600A/B, and Physics 1301A/B, 1302A/B, 1501A/B and 1502A/B. The minimum mark required in each of the Biology, Chemistry, Mathematics and Physics courses for admission to the Honors Specialization module will be revised from 65% to 60% (with the exception of Biology 1201A and 1202B – minimum marks of 70% will be required). The Notes will be revised to reflect revisions to the prerequisites for certain modular courses.*

HONORS SPECIALIZATION IN MEDICAL CELL BIOLOGY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information..

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 3.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
11.0 courses:
0.5 course: Biochemistry 2280A.
1.0 course from: Chemistry 2213A/B and 2223B, or Chemistry 2273A and 2283G.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses**:** Biology 2290F/G, 2382B, 2581B.
1.0 course**:** Anatomy and Cell Biology 3309.
1.0 course from: Anatomy and Cell Biology 3319, Physiology 3120.
1.0 course**:** Biochemistry 3381A and 3382B.
0.5 course: Biology 3316A/B.
0.5 course from: Biochemistry 3380G, Biology 3326F/G.
1.5 courses: Anatomy and Cell Biology 4410A, 4411B, 4429A.
0.5 course from: Anatomy and Cell Biology 4451A, 4461B
1.5 courses**:** Anatomy and Cell Biology 4480E (Research Project = 1.5 courses).

Notes for Module:
1. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
2. Enrolment in Biology 3326F/G requires a minimum mark of 70% in Biology 2382B.
3. Enrolment in Anatomy and Cell Biology 4429A requires a minimum mark of 70% in Biology 3316A/B.
4. Enrolment in Anatomy and Cell Biology 4410A requires either a minimum mark of 70% in Biology 3316A/B (preferred) or a minimum mark of 75% in Anatomy and Cell Biology 3309.
5. Enrolment in Anatomy and Cell Biology 4451A requires either Physiology 3120 or 3140A as a prerequisite.
6. Enrolment in Anatomy and Cell Biology 4461B requires either Anatomy and Cell Biology 3309 or Pathology 3240A as a prerequisite.
7. Enrolment in Anatomy and Cell Biology 4480E is limited and requires a minimum mark of 70% in each of Biochemistry 3381A and 3382B, and a minimum mark of 70% in either Biochemistry 3380G or Biology 3326F/G.

MAJOR IN MEDICAL CELL BIOLOGY
A degree containing this module normally requires 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) principal courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
6.0 courses:
0.5 course: Biochemistry 2280A.
0.5 course**:** Chemistry 2213A/B.
0.5 course: Biology 2382B.
0.5 course from: Biology 2290F/G, 2581B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
0.5 course: Biology 3316A/B.
1.0 course: Anatomy and Cell Biology 3309.
1.0 course from: Anatomy and Cell Biology 3319, Physiology 3120.
1.0 course from: Anatomy and Cell Biology 4410A, 4411B, 4429A, 4451A, 4461B.
Notes for Module:
1. Enrolment in Anatomy and Cell Biology 4429A requires a minimum mark of 70% in Biology 3316A/B.
2. Enrolment in Anatomy and Cell Biology 4410A requires either a minimum mark of 70% in Biology 3316A/B (preferred) or a minimum mark of 75% in Anatomy and Cell Biology 3309.
3. Enrolment in Anatomy and Cell Biology 4411B requires Anatomy and Cell Biology 4410A as a prerequisite.
4. Enrolment in Anatomy and Cell Biology 4451A requires either Physiology 3120 or 3140A as a prerequisite.

5. Enrolment in Anatomy and Cell Biology 4461B requires either Anatomy and Cell Biology 3309 or Pathology 3240A as a prerequisite.

MINOR IN MEDICAL CELL BIOLOGY
A degree containing this module may require 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including the following courses with a mark of at least 60% in each (full or half) course:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
Note: Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

Module
4.0 courses:
0.5 course: Biochemistry 2280A.
0.5 course: Chemistry 2213A/B.
0.5 course: Biology 2382B.
0.5 course from: Biology 2290F/G, 2581B.
2.0 courses from: Anatomy and Cell Biology 3309, 3319, 4410A, 4411B, 4429A, 4451A, 4461B, Biology 3316A/B.
Notes:
1. Enrolment in Anatomy and Cell Biology 4429A requires a minimum mark of 70% in Biology 3316A/B.
2. Enrolment in Anatomy and Cell Biology 4410A requires either a minimum mark of 70% in Biology 3316A/B (preferred) or a minimum mark of 75% in Anatomy and Cell Biology 3309.
3. Enrolment in Anatomy and Cell Biology 4411B requires Anatomy and Cell Biology 4410A as a prerequisite.
4. Enrolment in Anatomy and Cell Biology 4451A requires either Physiology 3120 or 3140A as a prerequisite.
5. Enrolment in Anatomy and Cell Biology 4461B requires either Anatomy and Cell Biology 3309 or Pathology 3240A as a prerequisite.

BIOCHEMISTRY
*That effective **September 1, 2010**, the Admission Requirements for the modules offered by the Department of Biochemistry be revised to accommodate the withdrawal of Biology 1222 and 1223, Chemistry 1050, Linear Algebra 1600A/B, and Physics 1020 and 1024, and the introduction of Biology 1001A, 1002B, 1201A, and 1202B, Chemistry 1100A/B and 1200B, Mathematics 1600A/B, and Physics 1301A/B, 1302A/B, 1501A/B and 1502A/B. The minimum mark required in each of the Biology, Chemistry, Mathematics and Physics courses for admission to the Honors Specialization module will be revised from 65% to 60%(with the exception of Biology 1201A and 1202B – minimum marks of 70% will be required). The "Notes for Module" will be revised to reflect revisions to the prerequisites for Biochemistry 3381A, Anatomy and Cell Biology 4410A and 4480E.*

HONORS SPECIALIZATION IN BIOCHEMISTRY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must achieve a mark of at least 60% in each of the 3.0 (full or half) principal courses below and have an average of at least 70% on these principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:

0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.0 courses:
(Because of prerequisite requirements it is recommended that the courses be taken in the order presented.)
0.5 course: Biochemistry 2280A.
0.5 course: Biology 2581B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
0.5 course from: Chemistry 2213A/B or 2273A
0.5 course from: Chemistry 2223B or 2283G
1.0 course from: Biology 2290F/G, 2382B, Chemistry 2211A/B, 2214A/B, 2374A or the former 2274A, 2384B or the former 2284B.
1.5 courses: Biochemistry 3380G, 3381A, 3382B.
2.5 courses: Biochemistry 4410A, 4420B, 4483E (Research Project = 1.5 courses).
1.5 courses from: Biochemistry 4400F, 4430B, 4435B, 4440A, 4445F, 4450A, 4463G, 4465A.
Notes for Module:
1. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
2. It is recommended that students include at least one of Biology 2290F/G, Chemistry 2214A/B, or Chemistry 2374A (or the former Chemistry 2284B).

HONORS SPECIALIZATION IN BIOCHEMISTRY AND CELL BIOLOGY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must achieve a mark of at least 60% in each of the 3.0 (full or half) principal courses below and have an average of at least 70% on these principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B,Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
10.5 courses:

(Because of prerequisite requirements, it is recommended that the courses be taken in the order presented.)
0.5 course: Biochemistry 2280A.
0.5 course from: Chemistry 2213A/B or 2273A
0.5 course from: Chemistry 2223B or 2283G
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses: Biology 2290F/G, 2382B, 2581B.
1.5 courses: Biochemistry 3380G, 3381A, 3382B.
1.0 course: Biology 3316A/B and 3326F/G.
1.0 course: Anatomy and Cell Biology 3309.
1.5 courses: Biochemistry 4410A, 4420B, 4430B.
0.5 course: Anatomy and Cell Biology 4429A.
1.5 courses from: Biochemistry 4483E (or the former Biochemistry 4480E) or Anatomy and Cell Biology 4480E (Research project = 1.5 courses).
Notes for Module:
1. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
2. Enrollment in Anatomy and Cell Biology 4429A requires a minimum mark of 70% in Biology 3316A/B.
3. Enrolment in Anatomy and Cell Biology 4480E is limited and requires a minimum mark of 70% in each of Biochemistry 3381A and 3382B; and either Biochemistry 3380G or Biology 3326F/G with a minimum mark of 70%.
4. Enrolment in Biochemistry 4483E is limited and requires a minimum mark of 70% in each of Biochemistry 3380G, 3381A, 3382B.

HONORS SPECIALIZATION IN BIOCHEMISTRY OF INFECTION AND IMMUNITY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must achieve a mark of at least 60% in each of the 3.0 (full or half) principal courses below and have an average of at least 70% on these principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
10.0 courses:
0.5 course: Biochemistry 2280A.
0.5 course from: Chemistry 2213A/B or 2273A
0.5 course from: Chemistry 2223B or 2283G
1.5 courses: Biology 2290F/G, 2382B, 2581B.
0.5 course from: Biology 2244A/B or Statistical Sciences 2122A/B.
1.5 courses: Microbiology and Immunology 2100A, 3300A, 3400B.

1.0 course: Biochemistry 3381A, 3382B.
0.5 course from: Biochemistry 3380G or Microbiology and Immunology 3600G.
1.0 course from: Microbiology and Immunology 4100A, 4200B, 4300A, 4700B.
1.0 course: Biochemistry 4410A, 4420B.
1.5 courses from: Biochemistry 4483E (Research Project = 1.5 courses) or Microbiology and Immunology 4970E (Research Project = 1.5 courses).
Notes for Module:
1. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
2. A minimum mark of 70% is required in each of Microbiology and Immunology 2100A, 3300A and 3400B.
3. Enrolment in Biochemistry 4483E is limited and requires a minimum mark of 70% in each of Biochemistry 3381A, 3382B, and either Biochemistry 3380G or Microbiology and Immunology 3600G.
4. Enrolment in Microbiology and Immunology 4970E is limited and requires a minimum mark of 70% in either Microbiology and Immunology 3600G or Biochemistry 3380G.

HONORS SPECIALIZATION IN CLINICAL BIOCHEMISTRY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must achieve a mark of at least 60% in each of the 3.0 (full or half) principal courses below and have an average of at least 70% on these principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
10.0 courses:
(Because of prerequisite requirements it is recommended that the courses be taken in the order presented.)
0.5 course: Biochemistry 2280A.
0.5 course: Biology 2581B.
0.5 course from: Chemistry 2213A/B or 2273A
0.5 course from: Chemistry 2223B or 2283G
1.0 course from: Biology 2290F/G, 2382B, Chemistry 2211A/B, 2214A/B, 2374A or the former 2274A, 2384B or the former 2284B.
0.5 course from: Biology 2244A/B,or Statistical Sciences 2122A/B.
0.5 course: Pathology 3240A.
2.5 courses: Biochemistry 3381A, 3382B, 3385A, 3386B, 3387G.
1.5 course: Biochemistry 4485E (Research Project = 1.5 courses).
2.0 courses: Biochemistry 4410A, 4420B, 4450A, 4463G.

Notes for Module:
1. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
2. Enrolment in Biochemistry 4485E is limited and requires a minimum mark of 70% in each of Biochemistry 3381A, 3382B, 3387G

MAJOR IN BIOCHEMISTRY
A degree containing this module normally requires 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) principal courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
6.0 courses:
0.5 course: Biochemistry 2280A.
0.5 course from: Chemistry 2213A/B or 2273A
0.5 course from: Chemistry 2223B or 2283G
0.5 course: Biology 2581B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
2.5 courses: Biochemistry 3380G, 3381A, 3382B, 4410A, 4420B.
1.0 course from: Biochemistry 3385A, 3386B, 4400F, 4430B, 4435B, 4440A, 4445F, 4450A, 4463G, 4465A.
Note: Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.

SPECIALIZATION IN BIOCHEMISTRY
Enrolment in this module requires registration in the BMSc Program. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:

0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.0 courses:
(Because of prerequisite requirements, it is recommended that the courses be taken in the order presented.)
0.5 course: Biochemistry 2280A.
0.5 course: Biology 2581B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
0.5 course from: Chemistry 2213A/B or 2273A
0.5 course from: Chemistry 2223B or 2283G
1.0 course from: Biology 2290F/G, 2382B, Chemistry 2211A/B, 2214A/B, 2374A or the former 2274A, 2384B or the former 2284B.
1.5 courses: Biochemistry 3380G, 3381A, 3382B.
0.5 course at the 2000- or 3000- level (with a lab component) from: Microbiology and Immunology 2100A, Medical Biophysics 3330F/G or from the Department of Biology or Chemistry.
1.0 course: Biochemistry 4410A, 4420B.
2.5 courses from: Biochemistry 3385A, 3386B, 4400F, 4430B, 4435B, 4440A, 4445F, 4450A, 4463G, 4465A.
Notes:
1. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
2. It is recommended that students include at least one of Biology 2290F/G, Chemistry 2214A/B, or Chemistry 2374A (or the former Chemistry 2284B).

MINOR IN BIOCHEMISTRY
A degree containing this module normally requires 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including the following courses:
1.0 course: Biology 1001A and 1002B each with a minimum mark of 60%, or a minimum mark of 60% in the former Biology 1222 or 1223.
1.0 course: Chemistry 1100A/B and 1200B each with a minimum mark of 60%, or a minimum mark of 60% in the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
Note: Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

Module
4.0 courses:
0.5 course from: Chemistry 2213A/B or 2273A
0.5 course from: Chemistry 2223B or 2283G
2.5 courses: Biochemistry 2280A, 3381A, 3382B, 4410A, 4420B.
0.5 course from: Biochemistry 3385A, 3386B, 4400F, 4430B, 4435B, 4440A, 4445F, 4450A, 4463G, 4465A.
Note: Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of

60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.

MEDICAL BIOPHYSICS

*That effective **September 1, 2010,** the Admission Requirements for the modules offered by the Department of Medical Biophysics be revised to accommodate the withdrawal of Biology 1222 and 1223, Chemistry 1050, and Physics 1020 and 1024, and the introduction of Biology 1001A, 1002B, 1201A, and 1202B, Chemistry 1100A/B and 1200B, Physics 1301A/B, 1302A/B, 1501A/B and 1502A/B. The first-year courses in calculus and physics taken by Engineering students will be added as alternative admission requirements to the modules. The minimum mark required in each of the Biology, Chemistry, Mathematics and Physics courses for admission to the Honors Specialization modules will be revised from 65% to 60% (with the exception of Biology 1201A and 1202B – minimum marks of 70% will be required). There are no revisions being proposed to the modules.*

HONORS SPECIALIZATION IN MEDICAL BIOPHYSICS (MEDICAL SCIENCE CONCENTRATION)

Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA

Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 4.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
0.5 course from: Physics 1028A/B, 1301A/B, 1401A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B, 1402A/B or 1502A/B
1.0 course from: Calculus 1000A/B or 1100A/B and Calculus 1301A/B or 1501A/B, or Applied Mathematics 1413
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050 or 023.
1.0 course: Biology 1001A and 1002B (may be deferred until Year 2), or the former Biology 1222 or 1223
Notes for Admission Requirements:
1. The combination of either Physics 1301A/B and 1302A/B or 1501A/B and 1502A/B is preferred for students interested in an Honors Specialization module in Medical Biophysics. One of the former Physics 1020, 1024 or 1026 with a minimum mark of 60%, may be used in place of two half courses in Physics as listed above.
2. Students will take Physics 2101A/B and Physics 2102A/B in the module if they complete any of Physics 1301A/B, 1302A/B, 1401A/B, 1402A/B, 1501A/B or 1502A/B, or the former Physics 1020, 1024 or 1026.
3. Students who complete Physics 1028A/B and 1029A/B may choose any combination of Medical Biophysics 2128A/B and 2129A/B, Physics 2128A/B and 2129A/B, or Physics 2101A/B and 2102A/B in the module (an average of at least 80% must be achieved in Physics 1028A/B and 1029A/B, however, to choose Physics 2101A/B and 2102A/B).
4. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

HONORS SPECIALIZATION IN MEDICAL BIOPHYSICS (PHYSICAL SCIENCE CONCENTRATION)

This module can only be completed within a BSc (Hons) degree.

Admission Requirements – approval on SCAPA

Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 4.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
0.5 course from: Physics 1028A/B, 1301A/B, 1401A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B, 1402A/B or 1502A/B
1.0 course from: Calculus 1000A/B or 1100A/B and Calculus 1301A/B or 1501A/B, or Applied Mathematics 1413
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050 or 023.
1.0 course: Biology 1001A and 1002B (may be deferred until Year 2), or the former Biology 1222 or 1223
Notes for Admission Requirements:
1. The combination of either Physics 1301A/B and 1302A/B or 1501A/B and 1502A/B is preferred for students interested in an Honors Specialization module in Medical Biophysics. One of the former Physics

1020, 1024 or 1026 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.
2. Students will take Physics 2101A/B and Physics 2102A/B in the module if they complete any of Physics 1301A/B, 1302A/B, 1401A/B, 1402A/B, 1501A/B or 1502A/B, or the former Physics 1020, 1024 or 1026.
3. Students who complete Physics 1028A/B and 1029A/B may choose any combination of Medical Biophysics 2128A/B and 2129A/B, Physics 2128A/B and 2129A/B, or Physics 2101A/B and 2102A/B in the module (an average of at least 80% must be achieved in Physics 1028A/B and 1029A/B, however, to choose Physics 2101A/B and 2102A/B).
4. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

SPECIALIZATION IN MEDICAL BIOPHYSICS
Enrolment in this module requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including the following courses with a minimum mark of 60% in each full or half course:
0.5 course from: Physics 1028A/B, 1301A/B, 1401A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B, 1402A/B or 1502A/B
1.0 course from: Calculus 1000A/B or 1100A/B and Calculus 1301A/B or 1501A/B, or Applied Mathematics 1413
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050 or 023.
1.0 course: Biology 1001A and 1002B (may be deferred until Year 2), or the former Biology 1222 or 1223
Notes for Admission Requirements:
1. The combination of either Physics 1301A/B and 1302A/B or 1501A/B and 1502A/B is preferred for students interested in the Specialization in Medical Biophysics. One of the former Physics 1020, 1024 or 1026 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.
2. Students will take Physics 2101A/B and Physics 2102A/B in the module if they complete any of Physics 1301A/B, 1302A/B, 1401A/B, 1402A/B, 1501A/B or 1502A/B, or the former Physics 1020, 1024 or 1026.
3. Students who complete Physics 1028A/B and 1029A/B may choose any combination of Medical Biophysics 2128A/B and 2129A/B, Physics 2128A/B and 2129A/B, or Physics 2101A/B and 2102A/B in the module (an average of at least 80% must be achieved in Physics 1028A/B and 1029A/B, however, to choose Physics 2101A/B and 2102A/B).
4. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

MAJOR IN MEDICAL BIOPHYSICS
A degree containing this module normally requires 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including the following courses with a minimum mark of 60% in each full or half course:
0.5 course from: Physics 1028A/B, 1301A/B, 1401A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B, 1402A/B or 1502A/B
1.0 course from: Calculus 1000A/B or 1100A/B and Calculus 1301A/B or 1501A/B, or Applied Mathematics 1413
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050 or 023.
1.0 course: Biology 1001A and 1002B (may be deferred until Year 2), or the former Biology 1222 r 1223
Notes for Admission Requirements:
1. The combination of either Physics 1301A/B and 1302A/B or 1501A/B and 1502A/B is Preferred for students interested in the Major in Medical Biophysics. One of the former Physics 1020, 1024 or 1026 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.
2. Students will take Physics 2101A/B and Physics 2102A/B in the module if they complete any of Physics 1301A/B, 1302A/B, 1401A/B, 1402A/B, 1501A/B or 1502A/B, or the former Physics 1020, 1024 or 1026.
3. Students who complete Physics 1028A/B and 1029A/B may choose any combination of Medical Biophysics 2128A/B and 2129A/B, Physics 2128A/B and 2129A/B, or Physics 2101A/B and 2102A/B in the

module (an average of at least 80% must be achieved in Physics 1028A/B and 1029A/B, however, to choose Physics 2101A/B and 2102A/B).
4. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

MINOR IN MEDICAL BIOPHYSICS
Admission Requirements – approval on SCAPA
Completion of first-year requirements, including the following courses with a minimum mark of 60% in each full or half course:
0.5 course from: Physics 1028A/B, 1301A/B, 1401A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B, 1402A/B or 1502A/B
1.0 course from: Calculus 1000A/B or 1100A/B and Calculus 1301A/B or 1501A/B, or Applied Mathematics 1413
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050 or 023.
1.0 course: Biology 1001A and 1002B (may be deferred until Year 2), or the former Biology 1222 or 1223
Notes for Admission Requirements:
1. The combination of either Physics 1301A/B and 1302A/B or 1501A/B and 1502A/B is preferred for students interested in the Minor in Medical Biophysics. One of the former Physics 1020, 1024 or 1026 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.
2. Students will take Physics 2101A/B and Physics 2102A/B in the module if they complete any of Physics 1301A/B, 1302A/B, 1401A/B, 1402A/B, 1501A/B or 1502A/B, or the former Physics 1020, 1024 or 1026.
3. Students who complete Physics 1028A/B and 1029A/B may choose any combination of Medical Biophysics 2128A/B and 2129A/B, Physics 2128A/B and 2129A/B, or Physics 2101A/B and 2102A/B in the module (an average of at least 80% must be achieved in Physics 1028A/B and 1029A/B, however, to choose Physics 2101A/B and 2102A/B).
4. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

MEDICAL SCIENCES

*That effective **September 1, 2010,** the Admission Requirements for the Medical Sciences modules be revised to accommodate the withdrawal of Biology 1222 and 1223, Chemistry 1050, Linear Algebra 1600A/B, and Physics 1020 and 1024, and the introduction of Biology 1001A, 1002B, 1201A, and 1202B, Chemistry 1100A/B and 1200B, Mathematics 1600A/B, and Physics 1301A/B, 1302A/B, 1501A/B and 1502A/B. The minimum mark required in each of the Biology, Chemistry, Mathematics and Physics courses for admission to the Honors Specialization module will be revised from 65% to 60% (with the exception of Biology 1201A and 1202B – minimum marks of 70% will be required). Additional revisions to the Specialization and Major modules in Medical Sciences include (i) an expansion of the list of courses offered by the Basic Medical Science departments from which either 5.5 or 3.0 courses must be chosen, (ii) a revision to the organic chemistry requirement so that it is identical to the requirement in the Honors Specialization in Medical Sciences.*

HONORS SPECIALIZATION IN MEDICAL SCIENCES
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 3.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B

It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.5 courses:
0.5 course: Biochemistry 2280A.
0.5 course from: Chemistry 2213A/B or 2273A.
0.5 course from: Chemistry 2223B or a Chemistry half course at the 2000- or 3000-level.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses**:** Biology 2290F/G, 2382B, 2581B.
1.0 course**:** Medical Sciences 4900F/G and 4930F/G, or the former Medical Sciences 400E.
5.0 courses***,** at least 2.0 of which must be at the 4000-level, from: Anatomy and Cell Biology 3309, 3319, 4410A, 4411B, 4429A, 4451A, 4461B, Biochemistry 3380G or 3387G, 3381A, 3382B, 3385A, 3386B, 4400F, 4410A, 4420B, 4430B, 4435A, 4440A, 4445F**,** 4450A, 4463G, 4465A, Epidemiology and Biostatistics 3330B, Medical Biophysics 3330F/G, 3336F/G, 3501F, 3503G, 3505F, 3507G, 4445A/B, 4455A/B, 4467A/B, 4475A/B, 4535A/B, Medical Sciences 4100F/G, Microbiology and Immunology 2100A, 2500B, 3300A, 3400B, 3600G, 4100A, 4200B, 4300A, 4700B, Pathology 3240A, 3245B, 4400A/B, 4500B, Pharmacology 2060A/B, 3550A/B, 3560A/B, 3580Y, 4320A/B, 4340A/B, 4360A/B, 4380A/B, 4430A/B, 4540A/B, 4620A, 4630A, 4660A/B, Physiology 3120, 3130Y, 3140A, 4420A/B, 4520A/B, 4610A/B, 4620A/B, 4630A/B, 4640A/B, 4650A/B, 4660A/B, 4670A/B, 4680A/B, 4690A/B, 4700A/B, 4710A/B, 4730B, the former Medical Biophysics 3302E, 3303E, the former Pathology 3900F/G.
*With these 5.0 courses, the following 'discipline requirement' must be satisfied:
2.0 courses from: one of the Basic Medical Science disciplines (e.g. 2.0 courses in Physiology);
2.0 courses from: either a second Basic Medical Science discipline or a combination of Basic Medical Science disciplines other than the first discipline chosen (e.g. 2.0 courses in Microbiology and Immunology, or 1.0 course in Microbiology and Immunology plus 0.5 course in Pathology and 0.5 course in Medical Biophysics); and
1.0 course from: any of the Basic Medical Science disciplines, including disciplines already selected (e.g. 1.0 additional course in Physiology, or 0.5 course in Biochemistry and 0.5 course in Pharmacology).
Basic Medical Science Disciplines:
Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Pharmacology, and Physiology. History of Science courses may not be used to satisfy the ‘discipline requirement’.
Notes for the Module:
1. In addition to Biology 2290F/G and Chemistry 2213A/B, one half course with a laboratory component chosen from those courses available in the module (e.g. Chemistry 2223B or Microbiology and Immunology 2100A) must be completed prior to entering the final year of the module.
2. When selecting courses for Years 3 and 4, students are advised to check the Undergraduate Course Information in the Academic Calendar for prerequisite information, and the Constraint charts under “Courses” on the BMSc website (www.uwo.ca/bmsc) for information about priority/restricted access to courses.

SPECIALIZATION IN MEDICAL SCIENCES
Enrolment in this module requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) principal courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B,

Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.0 courses:
0.5 course**:** Biochemistry 2280A.
0.5 course from: Chemistry 2213A/B or 2273A.
0.5 course from: Chemistry 2223B or a Chemistry half course at the 2000- or 3000-level.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses**:** Biology 2290F/G,2382B, 2581B.
5.5 courses* at least 1.0 of which must be at the 4000-level, from: Anatomy and Cell Biology 3309, 3319, 4410A, 4411B, 4429A, 4451A, 4461B, Biochemistry 3380G or 3387G, 3381A, 3382B, 3385A, 3386B, 4400F, 4410A, 4420B, 4430B, 4435A, 4440A, 4445F/G, 4450A, 4463G, 4465A, Epidemiology and Biostatistics 3330B, Medical Biophysics 3330F/G, 3336F/G, 3501F, 3503G, 3505F, 3507G, 4445A/B, 4455A/B, 4467A/B, 4475A/B, 4535A/B, Medical Sciences 4100F/G, Microbiology and Immunology 2100A, 2500B, 3300A, 3400B, 3600G, 4100A, 4200B, 4300A, 4700B, Pathology 3240A, 3245B, 4400A/B, Pharmacology 2060A/B, 3550A/B, 3560A/B, 3580Y, 4320A/B, 4340A/B, 4360A/B, 4380A/B, 4430A/B, 4540A/B, 4620A, 4630A, 4660A/B, Physiology 3120, 3130Y, 3140A, 4420A/B, 4520A/B, 4610A/B, 4620A/B, 4630A/B, 4640A/B, 4650A/B, 4660A/B, 4670A/B, 4680A/B, 4690A/B, 4700A/B, 4710A/B, 4730B, the former Medical Biophysics 3302E, 3303E, the former Pathology 3900F/G.
*With these 5.5 courses, the following 'discipline requirement' must be satisfied:
2.0 courses from: one of the Basic Medical Science disciplines (e.g. 2.0 courses in Physiology);
2.0 courses from: either a second Basic Medical Science discipline or a combination of Basic Medical Science disciplines other than the first discipline chosen (e.g. 2.0 courses in Microbiology and Immunology, or 1.0 course in Microbiology and Immunology plus 0.5 course in Pathology and 0.5 course in Medical Biophysics); and
1.5 courses from: any of the Basic Medical Science disciplines, including disciplines already selected (e.g. 1.0 additional course in Physiology, or 0.5 course in Biochemistry and 0.5 course in Pharmacology).
Basic Medical Science Disciplines:
Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Pharmacology, and Physiology. History of Science courses may not be used to satisfy the ‘discipline requirement’.
Notes for the Module:
1. In addition to Biology 2290F/G and Chemistry 2213A/B, one half course with a laboratory component chosen from those courses available in the module (e.g. Chemistry 2223B or Microbiology and Immunology 2100A) must be completed prior to entering the final year of the module.
2. When selecting courses for Years 3 and 4, students are advised to check the Undergraduate Course Information in the Academic Calendar for prerequisite information, and the Constraint charts under “Courses” on the BMSc website (www.uwo.ca/bmsc) for information about priority/restricted access to courses.

MAJOR IN MEDICAL SCIENCES
Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) principal courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
6.0 courses:
0.5 course**:** Biochemistry 2280A.
0.5 course from: Chemistry 2213A/B or 2273A.
0.5 course from: Chemistry 2223B or a Chemistry half course at the 2000- or 3000-level.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.0 course from : Biology 2290F/G, 2382B, 2581B.
3.0 courses* from: Anatomy and Cell Biology 3309, 3319, Biochemistry 3380G or 3387G, 3381A, 3382B, 3385A, 3386B, Epidemiology and Biostatistics 3330B, Medical Biophysics 3330F/G, 3336F/G, 3501F, 3503G, 3505F, 3507G, Microbiology and Immunology 2100A, 2500B, 3300A, 3400B, 3600G, Pathology 3240A, 3245B, Pharmacology 2060A/B, 3550A/B, 3560A/B, 3580Y, Physiology 3120, 3130Y, 3140A, the former Medical Biophysics 3302E, 3303E, or the former Pharmacology and Toxicology 357.
*With these 3.0 courses, the following 'discipline requirement' must be satisfied:
1.0 course from: one of the Basic Medical Science disciplines (e.g. 1.0 course in Anatomy and Cell Biology);
1.0 course from: a second Basic Medical Science discipline (e.g. 1.0 course in Microbiology and Immunology); and
1.0 course from: any of the Basic Medical Science disciplines, including disciplines already selected (e.g. 1.0 additional course in Anatomy and Cell Biology, or 0.5 course in Biochemistry and 0.5 course I Pharmacology).
Basic Medical Science Disciplines:
Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Pharmacology, and Physiology. History of Science courses may not be used to satisfy the ‘discipline requirement’.
Notes for the Module:
1. Basic Medical Science courses at the 4000-level may be included in the Major only with permission of the Medical Sciences counselor.
2. For information about constraints and accessing courses, please see “Courses” on the BMSc website (www.uwo.ca/bmsc).

MINOR IN MEDICAL SCIENCES
Admission Requirements – approval on SCAPA
Completion of first-year requirements, including the following courses with a mark of at least 60% in each (full or half) course:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
Note for Admission Requirements:
Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

Module
4.0 courses:
0.5 course**:** Biochemistry 2280A.
0.5 course**:** Chemistry 2213A/B.
1.0 course from: Biology 2290F/G, 2382B, 2581B.
1.5 courses from the Basic Medical Science disciplines (see below) at the 2000- or 3000-level
0.5 course from either one of the Basic Medical Science disciplines or Biology at the 2000- or 3000-level, or one of Chemistry 2210A/B, 2211A/B, 2214A/B, 2223B or 3393A/B. The following courses may not, however, be included: Physiology 2130, Medical Biophysics 2128A/B, 2129A/B.
Basic Medical Science Disciplines
Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Pharmacology, and Physiology.

MICROBIOLOGY AND IMMUNOLOGY

*That effective **September 1, 2010,** the Admission Requirements for the modules offered by the Department of Microbiology and Immunology be revised to accommodate the withdrawal of Biology 1222 and 1223, Chemistry 1050, Linear Algebra 1600A/B, and Physics 1020 and 1024, and the introduction of Biology 1001A, 1002B, 1201A, and 1202B, Chemistry 1100A/B and 1200B, Mathematics 1600A/B, and Physics 1301A/B, 1302A/B, 1501A/B and 1502A/B. The minimum mark required in each of the Biology, Chemistry, Mathematics and Physics courses for admission to the Honors Specialization module will be revised from 65% to 60% (with the exception of Biology 1201A and 1202B – minimum marks of 70% will be required). The Notes will be revised to reflect revisions to the prerequisites for certain modular courses.*

HONORS SPECIALIZATION IN MICROBIOLOGY AND IMMUNOLOGY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 3.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.5 courses:
0.5 course**:** Biochemistry 2280A.
1.0 course**:** Chemistry 2213A/B, 2223B.
1.5 courses**:** Biology 2290F/G, 2382B, 2581B.
0.5 course**:** Microbiology and Immunology 2100A.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
0.5 course: Biochemistry 3381A.

1.5 courses**:** Microbiology and Immunology 3300A, 3400B, 3600G.
1.5 course**:** Microbiology and Immunology 4970E (Research Project = 1.5 courses).
2.0 courses**:** Microbiology and Immunology 4100A, 4200B, 4300A, 4700B.
Notes for Module:
1. This module requires a minimum mark of 70% in each of Microbiology and Immunology 2100A, 3300A, 3400B, 3600G and Biochemistry 3381A.
2. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.

SPECIALIZATION IN MICROBIOLOGY AND IMMUNOLOGY
Enrolment in this module requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.0 courses:
0.5 course**:** Biochemistry 2280A.
1.0 course**:** Chemistry 2213A/B, 2223B.
1.5 courses**:** Biology 2290F/G, 2382B, 2581B.
0.5 course**:** Microbiology and Immunology 2100A.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
0.5 course**:** Biochemistry 3381A.
1.5 courses: Microbiology and Immunology 3300A, 3400B, 3600G.
2.0 courses: Microbiology and Immunology 4100A, 4200B, 4300A, 4700B.
1.0 course from Biology or the Basic Medical Science Disciplines* at the 2000- or 3000-level.
Notes for Module:
1. This module requires a minimum mark of 70% in each of Microbiology and Immunology 3300A and 3400B.
2. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
*****Basic Medical Science Disciplines**:** Anatomy and Cell Biology, Biochemistry, Epidemiology and Biostatistics, Medical Biophysics, Microbiology and Immunology, Pathology, Pharmacology, Physiology

MAJOR IN MICROBIOLOGY AND IMMUNOLOGY
A degree containing this module normally requires 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
6.0 courses:
0.5 course**:** Biochemistry 2280A.
1.0 course**:** Chemistry 2213A/B, 2223B.
1.0 course**:** Biology 2382B, 2581B.
0.5 course**:** Microbiology and Immunology 2100A.
0.5 course**:** Biochemistry 3381A.
1.5 courses**:** Microbiology and Immunology 3300A, 3400B, 3600G
1.0 course from**:** Microbiology and Immunology 4100A, 4200B, 4300A, 4700B.
Notes for Module:
1. Enrolment in Biochemistry 3381A requires a minimum mark of 65% in Biochemistry 2280A; either Chemistry 2213A/B with a minimum mark of 65% or Chemistry 2273A with a minimum mark of 60%; and either Chemistry 2223B with a minimum mark of 65% or Chemistry 2283G with a minimum mark of 60%.
2. Biology 2290F/G and either Biology 2244A/B or Statistical Sciences 2122A/B are recommended option courses.
3. Enrolment in either Microbiology and Immunology 4100A or 4200B requires a minimum mark of 70% in Microbiology and Immunology 3400B
4. Enrolment in Microbiology and Immunology 4300A requires a minimum mark of 70% in Microbiology and Immunology 3300A.

MINOR IN MICROBIOLOGY AND IMMUNOLOGY
Admission Requirements – approval on SCAPA
Completion of first-year requirements, including the following courses with a mark of at least 60% in each (full or half) course:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
Note: Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

Module
4.0 courses:
0.5 course: Chemistry 2213A/B.
0.5 course**:** Biochemistry 2280A.
1.0 course**:** Biology 2382B, 2581B.
2.0 courses**:** Microbiology and Immunology 2100A, 2500B, 3300A, 3400B

PATHOLOGY

*That effective **September 1, 2010,** the Admission Requirements for the modules offered by the Department of Pathology be revised to accommodate the withdrawal of Biology 1222 and 1223, Chemistry 1050, Linear Algebra 1600A/B, and Physics 1020 and 1024, and the introduction of Biology 1001A, 1002B, 1201A, and 1202B, Chemistry 1100A/B and 1200B, Mathematics 1600A/B, and Physics 1301A/B, 1302A/B, 1501A/B and 1502A/B. The minimum mark required in each of the Biology, Chemistry, Mathematics and Physics courses for admission to the Honors Specialization module will be revised from 65% to 60% (with the exception of Biology 1201A and 1202B – minimum marks of 70% will be required).*

HONORS SPECIALIZATION IN PATHOLOGY AND TOXICOLOGY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 3.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
11.0 courses:
0.5 course**:** Biochemistry 2280A.
1.0 course from: Biology 2290F/G, 2382B, 2581B.
0.5 course**:** Chemistry 2213A/B.
0.5 course from: Chemistry 2211A/B, 2214A/B, 2223B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
0.5 course from: Biology 3316A/B, Chemistry 2272F, Epidemiology and Biostatistics 3330B, Physiology 3140A.
1.0 course**:** Pharmacology 3550A/B and 3560A/B, or the former Pharmacology and Toxicology357.
1.0 course from: Anatomy and Cell Biology 3309, 3319.
1.0 course: Physiology 3120.
2.0 courses**:** Pathology 3240A, 3245B, 4400A/B, 4500B.
1.5 courses**:** Pathology and Toxicology 4980E (Research Project = 1.5 courses).
1.0 course from: Medical Sciences 4100F/G, Pharmacology 4320A/B, 4340A/B**,** 4360A/B, 4380A/B, 4430A/B, 4540A/B, 4620A, 4630A, 4660A/B, or the former Pharmacology and Toxicology 442a/b, 460a/b, the former Pathology 3900F/G.
Note: A minimum average of 70% in all Pharmacology courses, and a minimum mark of 75% in each of Pathology 3240A and 3245B, are required to progress in this module.

SPECIALIZATION IN PATHOLOGY AND TOXICOLOGY
Enrolment in this module requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
10.0 courses:
0.5 course**:** Biochemistry 2280A.
1.0 course from: Biology 2290F/G, 2382B, 2581B.
0.5 course**:** Chemistry 2213A/B.
0.5 course from: Chemistry 2211A/B, 2214A/B, 2223B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.0 course**:** Pharmacology 3550A/B and 3560A/B.
1.0 course**:** Physiology 3120, or the former Physiology 310.
2.0 courses**:** Pathology 3240A, 3245B, 4400A/B, 4500B.
1.0 course from: Pharmacology 4320A/B, 4360A/B, 4380A/B, 4430A/B, 4540A/B, 4620A, 4630A, 4660A/B, or the former Pharmacology and Toxicology 460a/b.
2.0 courses from: Anatomy and Cell Biology 3309, 3319, Biology 3316A/B, Chemistry 2272F, Epidemiology and Biostatistics 3330B, Physiology 3140A, the former Pathology 3900F/G.
Note: A minimum mark of 75% in each of Pathology 3240A and Pathology 3245B is required to progress in this module.

PHYSIOLOGY AND PHARMACOLOGY

*That effective **September 1, 2010,** the Admission Requirements for the modules offered by the Department of Physiology and Pharmacology be revised to accommodate the withdrawal of Biology 1222 and 1223, Chemistry 1050, Linear Algebra 1600A/B, and Physics 1020 and 1024, and the introduction of Biology 1001A, 1002B, 1201A, and 1202B, Chemistry 1100A/B and 1200B, Mathematics 1600A/B, and Physics 1301A/B, 1302A/B, 1501A/B and 1502A/B. The minimum mark required in each of the Biology, Chemistry, Mathematics and Physics courses for admission to the Honors Specialization modules will be revised from 65% to 60% (with the exception of Biology 1201A and 1202B – minimum marks of 70% will be required).*

HONORS SPECIALIZATION IN PHARMACOLOGY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 3.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.

1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
10.0 courses:
0.5 course**:** Biochemistry 2280A.
1.5 courses**:** Biology 2290F/G, 2382B, 2581B.
0.5 course**:** Chemistry 2213A/B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses**:** Physiology 3120 and 3140A
1.5 courses**:** Pharmacology 3550A/B, 3560A/B, 3580Y (or the former Pharmacology and Toxicology 357 and 0.5 course approved by the department).
1.5 courses**:** Pharmacology 4980E (Thesis = 1.5 courses).
1.5 additional courses in Pharmacology at the 4000-level.
1.0 course from: Pharmacology 2060A/B (see note 2 below), Epidemiology and Biostatistics 3330B, Pathology 3240A, 3245B, 4400A/B (a maximum of one half course in Pathology may be chosen), Chemistry 2210A/B, 2211A/B, 2214A/B, 2223B (a maximum of one half course in Chemistry may be chosen).
Notes for the Module:
1. Registration in Pharmacology 3580Y requires a minimum average of 70% in the previous year.
2. Students wishing to take both Pharmacology 2060A/B and 3550A/B must complete Pharmacology 2060A/B prior to Pharmacology 3550A/B.

HONORS SPECIALIZATION IN PHYSIOLOGY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 3.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.5 courses:
0.5 course**:** Biochemistry 2280A.
0.5 course**:** Chemistry 2213A/B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses**:** Biology 2290F/G, 2382B, 2581B.
2.0 courses: Physiology 3120, 3130Y and 3140A
1.0 course from: Anatomy and Cell Biology 3309, 3319, Biology 2471A/B, 2601A/B, 3338A, 3592A, 3595A, 3651A/B, Chemistry 2223B, Medical Biophysics 3501F, 3503G, 3505F, 3507G, the former Biology 2672A/B, 370b, or the former Medical Biophysics 3302E, 3303E.
1.5 course**:** Physiology 4980E (Thesis = 1.5 courses).
2.0 additional courses in Physiology at the 4000-level
Notes for the Module:
1. An average of at least 70% in the previous year is required for registration in Physiology 3130Y and in this module.
2. For flexibility in selecting alternative modules, Chemistry 2223B is recommended. Psychology 2810 may be substituted for Biology 2244A/B or Statistical Sciences 2122A/B. The module will include 10.0 courses if Psychology 2810 is taken.

HONORS SPECIALIZATION IN PHYSIOLOGY AND PHARMACOLOGY
Enrolment in this module is limited and requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 3.0 principal courses, with no mark below 60% in any of these (full or half) principal courses:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
10.0 courses:
0.5 course: Biochemistry 2280A.
0.5 course**:** Chemistry 2213A/B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses**:** Biology 2290F/G, 2382B, 2581B.
2.0 courses**:** Physiology 3120, 3130Y and 3140A
1.5 courses**:** Pharmacology 3550A/B, 3560A/B, 3580Y (or the former Pharmacology and Toxicology 357 and 0.5 course approved by the Department).
1.5 courses from: Physiology 4980E or Pharmacology 4980E (Thesis = 1.5 courses).
1.0 course from: Pharmacology 2060A/B, (see note below) and additional courses in Pharmacology at the 4000-level
1.0 additional course in Physiology at the 4000-level

Notes for the Module:
1. Registration in Pharmacology 3580Y and Physiology 3130Y requires a minimum average of 70% in the previous year.
2. Students wishing to take both Pharmacology 2060A/B and 3550A/B must complete Pharmacology 2060A/B prior to Pharmacology 3550A/B.
3. Chemistry 2223B and Pathology 3240A are recommended option courses. Psychology 2810 may be substituted for Biology 2244A/B or Statistical Sciences 2122A/B. The module will include 10.5 courses, if Psychology 2810 is taken.

HONORS SPECIALIZATION IN PHYSIOLOGY AND PSYCHOLOGY
Enrolment in this module is limited. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. This module is intended for students who wish to pursue graduate training in Physiology, Psychology or Neuroscience, and other related disciplines, and for students who prefer a more research intensive approach to the study of Physiology and Psychology. This module can only be completed within a BSc (Hons) degree.

Admission Requirements – approval on SCAPA
Completion of first-year requirements with no failures. Students must have an average of at least 70% on the following 5.0 principal courses, with no mark in these principal courses below 60%.
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
1.0 course from: Psychology 1000, 1100E, 1200.
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. The first-year Physics requirement may be delayed until Year 2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
10.5 courses:
0.5 course: Biochemistry 2280A.
0.5 course: Chemistry 2213A/B.
0.5 course from: Psychology 2220A/B, 2221A/B.
1.0 course: Psychology 2810.
1.0 course from: Biology 2290F/G, 2382B, 2581B.
2.0 courses: Physiology 3120, 3130Y and 3140A
1.0 course in Psychology numbered 2400 through 2790.
1.0 course in Psychology numbered 3200 through 3290, or 4000 through 4290.
1.5 courses: Physiology 4980E (Thesis = 1.5 courses).
1.5 additional courses in Physiology at the 4000-level.
Notes for the Module:
1. An average of at least 70% in the previous year is required for registration in Physiology 3130Y and in this module.
2. For flexibility in selecting alternative modules, Chemistry 2223B is recommended as an option course.

MAJOR IN PHARMACOLOGY
A degree containing this module normally requires 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) principal courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223

1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023. 1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
6.0 courses:
0.5 course**:** Biochemistry 2280A.
0.5 course**:** Biology 2382B.
0.5 course**:** Chemistry 2213A/B.
1.0 course**:** Physiology 3120.
1.5 courses**:** Pharmacology 3550A/B, 3560A/B, 3580Y (or the former Pharmacology and Toxicology 357 and 0.5 course approved by the Department).
1.5 courses from: Pharmacology 2060A/B, (see note below) and courses in Pharmacology at the 4000-level (with the exception of Pharmacology 4980E).
0.5 course from: Pathology 3240A, 3245B, 4400A/B, Physiology 3140A.
Notes for the Module:
1. Registration in Pharmacology 3580Y requires a minimum average of 70% in the previous year.
2. Students wishing to take both Pharmacology 2060A/B and 3550A/B must complete Pharmacology 2060A/B prior to Pharmacology 3550A/B.

MAJOR IN PHYSIOLOGY
A degree containing this module normally requires 4 years for completion.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) principal courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
6.0 courses:
0.5 course: Biochemistry 2280A.

0.5 course: Chemistry 2213A/B.
1.0 course from: Biology 2290F/G, 2382B, 2581B.
2.0 courses: Physiology 3120, 3130Y, 3140A.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses in Physiology at the 4000-level (with the exception of Physiology 4980E)
Notes for the Module:
1. An average of at least 70% in the previous year is required for registration in Physiology 3130Y.
2. For flexibility in selecting alternative modules, Chemistry 2223B is recommended as an option course. Psychology 2810 may be substituted for Biology 2244A/B or Statistical Sciences 2122A/B. The module will include 6.5 courses, if Psychology 2810 is taken

SPECIALIZATION IN PHARMACOLOGY
Enrolment in this module requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.5 courses:
0.5 course: Biochemistry 2280A.
1.5 courses: Biology 2290F/G, 2382B, 2581B.
0.5 course: Chemistry 2213A/B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses from: Pharmacology 3550A/B, 3560A/B, 3580Y (or the former Pharmacology and Toxicology 357 and 0.5 course approved by the Department).
1.5 courses: Physiology 3120, 3140A
1.0 course from: Anatomy and Cell Biology 3309, 3319.
1.0 course: in Pharmacology at the 4000-level (with the exception of Pharmacology 4980E).
1.5 courses from: Pharmacology 2060A/B (see note 2 below), Epidemiology and Biostatistics 3330B, Pathology 3240A, 3245B, 4400A/B (a maximum of one half course in Pathology may be chosen), Chemistry 2210A/B, 2211A/B, 2214A/B, 2223B (a maximum of one half course in Chemistry may be chosen).
Notes for the Module:
1. Registration in Pharmacology 3580Y requires a minimum average of 70% in the previous year.
2. Students wishing to take both Pharmacology 2060A/B and 3550A/B must complete Pharmacology 2060A/B prior to Pharmacology 3550A/B

SPECIALIZATION IN PHYSIOLOGY
Enrolment in this module requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See "Admission to BMSc" for more detailed information about the Admission Criteria for the BMSc Program, including the marks and averages required in first-year and modular courses.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:
0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.5 courses:
0.5 course: Biochemistry 2280A.
0.5 course: Chemistry 2213A/B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.5 courses: Biology 2290F/G, 2382B, 2581B.
2.0 courses: Physiology 3120, 3130Y, 3140A.
1.5 courses from: Anatomy and Cell Biology 3309, 3319, Biology 2471A/B, 2601A/B, 3338A, 3592A, 3595A, 3651A/B, Chemistry 2223B, Medical Biophysics 3501F, 3503G, 3505F, 3507G, the former Biology 2672A/B, 370b, or the former Medical Biophysics 3302E, 3303E.
3.0 courses in Physiology at the 4000-level (with the exception of Physiology 4980E)
Notes for the Module:
1. An average of at least 70% in the previous year is required for registration in Physiology 3130Y and in this module.
2. For flexibility in selecting alternative modules, Chemistry 2223B is recommended as an option course. Psychology 2810 may be substituted for Biology 2244A/B or Statistical Sciences 2122A/B. The module will include 10.0 courses, if Psychology 2810 is taken

SPECIALIZATION IN PHYSIOLOGY AND PHARMACOLOGY
Enrolment in this module requires registration in the BMSc Program. Meeting the minimum requirements does not guarantee that students wishing to enter or progress in this module will be offered enrolment. See www.uwo.ca/bmsc for more detailed information.

Admission Requirements – approval on SCAPA
Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) courses below:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
1.0 course from: Calculus 1000A/B or 1100A/B, Calculus 1301A/B or 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, Mathematics 1225A/B, 1228A/B, 1229A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1201A/B, Applied Mathematics 1413, or the former Mathematics 030
The following must be completed by the end of second year, with a mark of at least 60% in each half course:

0.5 course from: Physics 1028A/B, 1301A/B or 1501A/B
0.5 course from: Physics 1029A/B, 1302A/B or 1502A/B
It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.
Notes for Admission Requirements:
1. Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
2. Either the former Physics 1020 or 1024 with a minimum mark of 60%, may be used in place of two half courses in Physics listed above.

Module
9.5 courses:
0.5 course: Biochemistry 2280A.
0.5 course: Chemistry 2213A/B.
0.5 course from: Biology 2244A/B, Statistical Sciences 2122A/B.
1.0 course: Biology 2290F/G, 2581B.
0.5 course from: Biology 2382B, Pathology 3240A.
2.0 courses**:** Physiology 3120, 3130Y, 3140A.
1.5 courses: Pharmacology 3550A/B, 3560A/B, 3580Y (or the former Pharmacology andToxicology 357 and 0.5 course approved by the Department).
1.5 courses from: Pharmacology 2060A/B, (see note below) and courses in Pharmacology at the 4000-level (with the exception of Pharmacology 4980E).
1.5 courses in Physiology at the 4000-level (with the exception of Physiology 4980E)
Notes for the Module:
1. An average of at least 70% in the previous year is required for registration in both Pharmacology 3580Y and Physiology 3130Y.
2. Students wishing to take both Pharmacology 2060A/B and 3550A/B must complete Pharmacology 2060A/B prior to Pharmacology 3550A/B.
3. For flexibility in selecting alternative modules, Chemistry 2223B is recommended as an option course. Psychology 2810 may be substituted for Biology 2244A/B or Statistical Sciences 2122A/B. The module will include 10.0 courses, if Psychology 2810 is taken

MINOR IN PHARMACOLOGY
Admission Requirements
Completion of first-year requirements, including the following courses with a mark of at least 60% in each (full or half) course:
1.0 course: Biology 1001A and 1002B, or the former Biology 1222 or 1223
1.0 course: Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023.
Note: Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

Module
4.0 courses:
0.5 course**:** Biochemistry 2280A.
0.5 course**:** Chemistry 2213A/B.
1.0 course: Physiology 2130.
1.0 course: Pharmacology 3550A/B, 3560A/B.
1.0 course from: Pharmacology 2060A/B, (see note below) and courses in Pharmacology at the 4000-level (with the exception of Pharmacology 4980E).
Notes for the Module**:**
1. Students wishing to take both Pharmacology 2060A/B and 3550A/B must complete Pharmacology 2060A/B prior to Pharmacology 3550A/B.
2. Many of the 4000-level Pharmacology courses require either Pharmacology 3580Y as a prerequisite or Pharmacology 3550A/B and/or Pharmacology 3560A/B with a particular mark/average as a prerequisite. Check the prerequisites for the 4000-level Pharmacology courses in the UNDERGRADUATE COURSE INFORMATION section

FACULTY OF SCIENCE

ACTUARIAL SCIENCES

*That effective **September 1, 2010,** the course description, antirequisite and prerequisite for Statistical Sciences 1023A/B be revised.*

Statistical Sciences 1023A/B – Statistical Concepts
An examination of statistical issues aiming towards statistical literacy and appropriate interpretation of statistical information. Common misconceptions will be targeted. Assessment of the validity and treatment of results in popular and scientific media. Conceptual consideration of study design, numerical and graphical data summaries, probability, sampling variability, confidence intervals and hypothesis tests.
Antirequisite(s): Statistical Sciences 2037A/B
3 lecture hours, 0.5 lab hours (1-hour lab every other week), 0.5 course.

BIOCHEMISTRY

*That effective **September 1, 2010,** Biochemistry 2288A: Biochemistry and Molecular Biology for Foods and Nutrition be introduced by the Department of Biochemistry in the Schulich School of Medicine & Dentistry. This new course will be restricted to students in the Foods and Nutrition modules as an alternative to Biochemistry 2280A. The prerequisite for Biochemistry 2280A will be revised by removing "or registration in senior years of Foods and Nutrition modules" and Biochemistry 2288A will be added as an antirequisite to Biochemistry 2280A.*

Revised Calendar Copy:
Biochemistry 2280A: Biochemistry and Molecular Biology
An introduction to biochemistry with emphasis on protein structure and function, intermediary metabolism and nucleic acid structure and function.
Antirequisite(s): Biochemistry 2288A
Prerequisite(s): either Biology 1001A or 1201A and either Biology 1002B or 1202B, or one of the former Biology 1222 or 1223; Chemistry 1100A/B and 1200B, or one of the former Chemistry 1020, 1050 or 023.
3 lecture hours, 0.5 course.
Note: it is strongly recommended that a course in organic chemistry be taken previously or concurrently (e.g. Chemistry 2213A/B or 2273A).

New Calendar Copy:
Biochemistry 2288A: Biochemistry and Molecular Biology for Foods and Nutrition
An introduction to biochemistry with emphasis on protein structure and function, intermediary metabolism and nucleic acid structure and function.
Antirequisite(s): Biochemistry 2280A
Prerequisite(s): Chemistry 1100A/B and 1200B, or one of the former Chemistry 1020, 1050 or 023; Biology 1290B; and registration in senior years of Foods and Nutrition modules.
3 lecture hours, 0.5 course.
Note: it is strongly recommended that a course in organic chemistry be taken previously or concurrently (e.g. Chemistry 2213A/B or 2273A).

COMPUTER SCIENCE

*Effective **September 1, 2010,** Computer Science 1011A/B ("The Internet: Behind the Curtain") will be introduced in the Department of Computer Science, Faculty of Science, with the following course description:*

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.
3 lecture hours, 0.5 course

*Effective **September 1, 2010,** the admission requirements for the Honors Specialization in Bioinformatics (Biochemistry Concentration), offered by the Departments of Biochemistry and Computer Science, be revised.*

Admission Requirements
Completion of first-year requirements with no failures. Students must have an average of at least 70% in 4.0 principal courses, with no mark in these principal courses below 60%, including:
Biology 1001A and 1002B, or the former Biology 1222 or 1223; Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023; Computer Science 1025A/B or 1026A/B or Engineering Science 1036A/B or the former Computer Science 036a/b; Computer Science 1027A/B or 1037A/B, in either case with a mark of at least 65%; 1.0 course from: Applied Mathematics 1201A/B, Applied Mathematics 1413, Calculus 1000A/B, 1100A/B, 1301A/B, 1501A/B, Mathematics 1600A/B, the former Linear Algebra 1600 A/B, or the former Calculus 1201A/B.
Note: Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.
Students taking this module must see a Departmental Counsellor in Biochemistry or Computer Science for advice concerning the order in which courses have to be taken.

Module
11.5 courses:
2.5 courses: Biochemistry 2280A, 3381A, 4410A, 4420B, 4440A.
0.5 course: Biology 2581B.
4.0 courses: Computer Science 2209A/B, 2210A/B, 2211A/B, 3319A/B, 3331A/B, 3340A/B, 3346A/B, 4463A/B.
1.0 course: Mathematics 2155A/B, 2156A/B.
0.5 course from: Chemistry 2213A/B or Chemistry 2273A.
0.5 course from: Chemistry 2223B or Chemistry 2283G.
0.5 course from: Biochemistry 3380G, 3382B, Microbiology and Immunology 3400B, Biology 3466B, 3592A, 3593B.
0.5 course from: Biochemistry 4435B, 4445F/G or Computer Science 4461A/B.
0.5 course from: Computer Science 4412A/B or 4462A/B.
0.5 course from: Biochemistry 4460Y or Computer Science 4460Z.
0.5 course from: Biology 2244A/B or Statistical Sciences 2122A/B.

*Effective **September 1, 2010,** the admission requirements for the Honors Specialization in Bioinformatics (Computer Science Concentration), offered by the Departments of Biochemistry and Computer Science, be revised*.

Admission Requirements
Completion of first-year requirements with no failures. Students must have an average of at least 70% in 4.0 principal courses, with no mark in these principal courses below 60%, including:
Biology 1001A and 1002B, or the former Biology 1222 or 1223; Chemistry 1100A/B and 1200B, or the former Chemistry 1020, 1050, or 023; Computer Science 1025A/B or 1026A/B or Engineering Science 1036A/B or the former Computer Science 036a/b; Computer Science 1027A/B or 1037A/B, in either case with a mark of at least 65%; 1.0 course from: Applied Mathematics 1201A/B, Applied Mathematics 1413, Calculus 1000A/B, 1100A/B, 1301A/B, 1501A/B, Mathematics 1600A/B, the former Linear Algebra 1600 A/B, or the former Calculus 1201A/B.

Note: Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

Students taking this module must see a Departmental Counsellor in Computer Science for advice concerning the order in which courses have to be taken.

Module
12.0 courses:
1.0 course: Biochemistry 2280A, Biology 2581B.
0.5 course: Chemistry 2213A/B.
6.0 courses: Computer Science 2208A/B, 2209A/B, 2210A/B, 2211A/B, 2212A/B/Y, 3305A/B, 3319A/B, 3331A/B, 3340A/B, 4460Z, 4462A/B, 4463A/B.
1.0 course: Mathematics 2155A/B, 2156A/B.

0.5 course from: Computer Science 3307A/B/Y, 3346A/B.
0.5 course from: Biochemistry 4445F/G, Computer Science 4461A/B.
0.5 course from: Biology 2290F/G, Chemistry 2223B.
0.5 course from: Biochemistry 3381A, Biology 3592A, 3593B.
1.0 course from: Computer Science 4411A/B,4412A/B, 4432A/B, 4445A/B.
0.5 course from: Statistical Sciences 2122A/B, 2141A/B, the former 2657A, Biology 2244A/B.

Chemistry 2213A/B and 2223B may be replaced in the module by Chemistry 2273A and 2283G or by the former Chemistry 253.

STATISTICAL SCIENCE

*That effective **September 1, 2010,** the course description and antirequisite for Statistical Sciences 2037A/B be revised.*

Statistical Sciences 2037A/B – Statistics for Health
An examination of statistical issues aiming towards statistical literacy and appropriate interpretation of statistical information. Common misconceptions will be targeted. Assessment of the validity and treatment of results in popular and scientific media. Conceptual consideration of study design, numerical and graphical data summaries, probability, sampling variability, confidence intervals and hypothesis tests. Emphasis will be placed on health-related applications.
Antirequisite(s): Statistical Sciences 1023A/B.
3 lecture hours, 0.5 lab hours (1-hour lab every other week), 0.5 course.
Note: Cannot be taken for credit by students registered in the Faculty of Science and Schulich School of Medicine and Dentistry with the exception of students in Food and Nutrition.

*That effective **September 1, 2010,** Statistical Sciences 2122A/B be withdrawn.*

*That effective **September 1, 2010,** Statistical Sciences 2244A/B be introduced.*

Statistical Sciences 2244A/B—Statistics for Science
An introductory course in the application of statistical methods, intended for honors students in departments other than Statistical and Actuarial Sciences, Applied Mathematics, Mathematics, or students in the Faculty of Engineering. Topics include sampling, confidence intervals, analysis of variance, regression and correlation. Cannot be taken for credit in any module in Statistics, Actuarial Science, or Financial Modelling.
Antirequisite(s): All other courses or half courses in Introductory Statistics except Statistical Sciences 1023A/B, Statistical Sciences 2037A/B and Statistical Sciences 1024A/B.
Prerequisite(s): A full mathematics course, or equivalent, numbered 1000 or above. Statistical Sciences 1024A/B can be used to meet 0.5 of the 1.0 mathematics course requirement.
2 lecture hours, 3 lab hours, 0.5 course.

*That effective **September 1, 2010,** the prerequisite for Statistical Sciences 3520A/B be revised.*

Statistical Sciences 3520A/B -- Financial Modelling I
Discrete-time market models, option pricing and replication, risk-neutral valuation and martingale measures, and the fundamental theorem of asset pricing. Discrete-time Black-Scholes. Value-at-risk, mean-variance portfolio analysis, capital asset pricing model. Discrete-time interest rate models. Duration, convexity and immunization. Simulation.
Antirequisite(s): The former Statistical Sciences 4520A/B.
Prerequisite(s): A minimum mark of 60% in both Actuarial Science 2557A/B and Statistical Sciences 2857A/B.
3 lecture hours, 0.5 course.

FACULTY OF SCIENCE/ RICHARD IVEY SCHOOL OF BUSINESS

*That, effective **September 1, 2010,** the Combined Science/HBA, offered by the Richard Ivey School of Business and the Faculty of Science, be revised.*

The completion of these combined degrees takes five academic years. Students apply for the combined degree program during the HBA 1st year, typically their third year of University. To be eligible for consideration for admission to this program, students must complete:
a full first year (5.0 courses), including all the principal courses with the appropriate marks required for admission to an Honors Specialization offered by the Faculty of Science; a second year (5.0 courses), including 4.0 courses of their Honors Specialization module with a minimum average mark of 70 % and no mark less than 60 % in these modular courses, and Business Administration 2257 with a minimum mark of 70 %. Because entrance to the program is competitive and limited, students must achieve a minimum two-year (10.0 course) average of 80%. Demonstrated participation in extracurricular and/or community activities, leadership, and work experience are also taken into consideration.

Students applying to the Richard Ivey School of Business Advanced Entry Opportunity (AEO) are also eligible to be considered for the combined degree program.

Year 1
5.0 courses including:
. all the required courses with the appropriate marks needed for admission to an Honors Specialization offered by the Faculty of Science;
. 1.0 first year course from Category B

Year 2
. 4.0 courses from an Honors Specialization offered by the Faculty of Science
. Business Administration 2257

Year 3 (HBA1)
The third year of the undergraduate program in Business Administration consists of an integrated set of courses (8.25 courses) designed to give a basic understanding of the functions and the interrelationships of the major areas of management, as well as to develop problem-solving and action-planning skills.

All students will take: Business Administration 3300K, 3301K, 3302K, 3303K, 3304K, 3307K, 3311K, 3316K, 3321K, 3322K, 3323K.

No substitute for any of the above courses is permitted under any circumstances.

Years 4 and 5 (HBA2 Requirements can be taken over year 4 or 5 - no course is restricted to either year) 2.0 courses: International Perspective Requirement: Business Administration 4505A/B - Global Environment of Business; Corporations and Society Perspective Requirement: at least one 0.5 course from Business Administration 4521A/B, 4522A/B, 4523A/B or other business elective as determined and approved by the HBA Program Director to satisfy this requirement. Applied Project Requirement: At least one of Ivey Consulting Project

Business Administration 4430 (1.0 course) or Ivey New Venture Project
Business Administration 4410 (1.0 course).
3.0 additional business elective credits

Years 4 and 5 (Honors Science)
6.0 courses from an Honors Specialization offered by the Faculty of Science

Notes:
1. The standard breadth and essay requirements for a BSc degree must be satisfied.
2. When the Honors Specialization requires fewer than 6.0 courses be taken in years 4 and 5, students will take additional business elective credits to ensure that a total of 11.0 courses is completed in years 4 and 5.

Program Requirements

Students registered in the combined program are expected to abide by all guidelines associated with each of the individual programs.

Progression Standards
Forwarded to SCAPA

Failure to Meet Progression Standards
Forwarded to SCAPA

Dean's Honor List
No change

Graduation
No change

Graduation With Distinction
No change

Science Internship
No change

International Exchange Programs
Students in the combined program may be eligible to participate in academic exchange programs. Interested students should discuss exchange options with the HBA Program Office and with the Faculty of Science.

Fees
No change

FACULTY OF SOCIAL SCIENCE

AMERICAN STUDIES

*Effective **March 1, 2010,** History 2301E; The United States, Colonial Period to the Present, will be included in the degree Minor in American Studies.*

MINOR IN AMERICAN STUDIES
Admission Requirements
Completion of first-year requirements, including American Studies 1020 and 1.0 course from the following with a mark of at least 60% in each: History 1701E, Political Science 1020E, English 1020E, English 1022E, or English 1024E. (Additional course is strongly recommended.)
Module
4.0 courses:
1.0 course: American Studies 2200E
1.0 course from: English 3664E, 3665E, Film Studies 2253E, History 2301E, Political Science 2244E
2.0 courses from: American Studies 2230F/G, American Studies 2231F/G, American Studies 3330F/G, American Studies 3340F/G, Anthropology/First Nations Studies 2211F/G, 2216F/G, 2231F/G, English 2017, 2261F/G, Film Studies 2152F/G, 2253E, First Nations Studies 2132F/G, Geography 2142A/B, History 2703F/G, 3315E, 3305E, 3396F/G-3399F/G, Political Science 2102A/B, 2104

WOMENS STUDIES

*That effective **September 1, 2010,** the prerequisites for most 4000 level courses be aligned. Students need take only one of WS2256E or WS2257E rather than both courses for most 4000 level courses.*

Women's Studies 4456F/G Advanced Seminar in Feminist Theory and Practice
Selected topics on issues connected to feminist theory and practice.
Consult the Department of Women's Studies and Feminist Research for current seminar topics.

Prerequisite(s): Women's Studies 2256E or 2257E, or permission of the Department
3 hours, 0.5 course.

Women's Studies 4458F/G Advanced Seminar in Feminist Theory and Practice
Selected topics on issues connected to feminist theory and practice.
Consult the Department of Women's Studies and Feminist Research for current seminar topics.
Prerequisite(s): Women's Studies 2256E or 2257E, or permission of the Department
3 hours, 0.5 course.

Women's Studies 4463F/G Advanced Seminar in Sexuality Studies
Selected topics on issues connected to Sexuality Studies. Consult the Department of Women's Studies and Feminist Research for current seminar topics.
Prerequisite(s): Women's Studies 2256E or 2257E, or permission of the Department
3 hours, 0.5 course.

Women's Studies 4464F/G Special Topics in Women's Studies
Topics of current interest in Women's Studies. Consult the Department of Women's Studies and Feminist Research for current offerings.
Prerequisite(s): Women's Studies 2256E or 2257E, or permission of the Department
3 hours, 0.5 course.

REGISTRAR'S UPDATE

Faculty of Science

BIOLOGY 2382B
Change To: 2 lecture hours, 1 lecture/tutorial hour
Change From: 5 Laboratory hours listed