

The following proposals, received on DAP between June 16-30, 2019, have been approved. For more information on the DAP process, [see the Secretariat's website](#).

FACULTY OF INFORMATION STUDIES

DIGITAL COMMUNICATION

Effective **September 1, 2019**, the following course be revised.

Digital Communication 3206F/G FROM ARCADES TO ESPORTS: VIDEO GAME CULTURE, TECHNOLOGY, AND INDUSTRY

Antirequisite(s): MIT 3371F/G.

Prerequisite(s): ~~Digital Communication 2001A/B and Digital Communication 2002A/B.~~

MEDIA, INFORMATION AND TECHNOCULTURE

Effective **September 1, 2019**, the following courses be revised.

Media, Information and Technoculture 2600A/B INTRODUCTION TO GRAPHIC DESIGN

Antirequisite(s): **Digital Communication 2204A/B**. Registration in the Multimedia Design and Production stream of the MTP Program.

Media, Information and Technoculture 3214F/G ADVERTISING AND THE MASS MEDIA

Prerequisite(s): ~~At least 65% in each of MIT 1200F/G, MIT 1500F/G and MIT 1700F/G.~~

FACULTY OF SCIENCE and SCHULICH SCHOOL OF MEDICINE & DENTISTRY

BIOLOGY

Effective **September 1, 2019**, the following courses be revised.

Biology 3444F/GA/B MOLECULAR ECOLOGY

Biology 4405F/GA/B ECOSYSTEM ECOLOGY

Extra Information: ~~2~~ **3** lecture hours, ~~3~~ laboratory hours.

Effective **September 1, 2019**, the following modules be revised.

HONORS SPECIALIZATION IN BIODIVERSITY AND CONSERVATION

Module

10.5 courses:

2.5 courses: Biology 2483A/B, Biology 2601A/B, Biology 2581A/B, Biology 2290F/G, Biology 2382A/B.

0.5 course: Biochemistry 2280A.

0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B.

0.5 course from: Chemistry 2213A/B, Chemistry 2210A/B.

2.0 courses: Biology 3484A/B, Biology 3445F/G, Biology 3440A/B, Biology 3442F/G.

0.5 course from: Biology 3220Z, Biology 3230F/G, Biology 3403A/B.

0.5 course from: Biology 3218F/G, Biology 3404F/G, Biology 3229F/G, Biology 4420A/B.

0.5 course from: Biology 3444F/GA/B, Biology 3466A/B.

0.5 course from: Biology 3415F/G, Biology 4405F/GA/B, Biology 4223F/G, Geography 3343A/B.

0.5 course: Biology 4289A/B.

1.0 courses: Biology 4412F/G, Biology 4410F/G.

1.0 course from: Biology 3435F/G, Biology 3436F/G, Biology 3446A/B, Biology 3475A/B, Biology 4200A/B, Biology 4230A/B, Biology 4259F/G, Biology 4944F/G, Biology 4970F/G, Biology 4999E, Geography 2133A/B, Geography 3352A/B, Geography 3441F/G, Geography 3445F/G, the former Biology 4243F/G, or courses above if not already taken.

HONORS SPECIALIZATION IN GENETICS

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including: Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B; Chemistry 1301A/B and Chemistry 1302A/B, ~~or the former Chemistry 1100A/B and the former Chemistry 1200B~~; plus 1.0 additional course, with no mark in any of these principal courses below 60%.

0.5 course from: Physics 1028A/B, Physics 1301A/B or Physics 1501A/B.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1100A/B, the former Linear Algebra 1600A/B. If not completed in first year, the Mathematics requirement must be completed by the end of second year.

Module

10.0 courses:

0.5 course: Biochemistry 2280A.

3.5 courses: Biology 2290F/G, Biology 2382A/B, Biology 2483A/B, Biology 2581A/B, Biology 3596A/B, Biology 4583F/G, Biology 4950F/G.

0.5 course: Chemistry 2213A/B.

0.5 course: Biology 2244A/B, Statistical Sciences 2244A/B.

0.5 course from: Biology 2601A/B.

1.0 course from: Biology 3466A/B, Biology 3467A/B, Biology 3592A/B, Biology 3598A/B.

1.0 course from: Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

0.5 course from: Any of the 3000-level Biology courses listed above and not already taken.

2.0 courses from: Biology 4260A/B, Biology 4289A/B, Biology 4355F/G, Biology 4510F/G, **Biology 4515A/B**, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B, Biology 4563F/G, Biology 4970F/G, Biology 4999E, ~~the former Microbiology and Immunology 4700B~~.

Notes:

~~In addition to the normal progression requirements for Honors Specializations, students must obtain a minimum mark of 70% in each of Biology 2581B, Biology 2290F/G and Biology 3596A/B and 1.0 of the 3000 level Biology courses listed above.~~

1. For progression into third year of this module, **students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G.**

2. For progression into fourth year of this module, **students must obtain a minimum 70% in each of Biology 3596A/B and 1.0 of the 3000 level Biology courses listed above.**

HONORS SPECIALIZATION IN GENETICS AND BIOCHEMISTRY

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%. 1.0 course from: Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B

1.0 course from: Chemistry 1301A/B and Chemistry 1302A/B, ~~or the former Chemistry 1100A/B and the former Chemistry 1200B~~

1.0 course from: Applied Mathematics 1201A/B, Applied Mathematics 1413, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, Statistical Sciences 1024A/B

1.0 course from: Physics 1028A/B or Physics 1301A/B or Physics 1501A/B and Physics 1029A/B or Physics 1302A/B or Physics 1502A/B.

Module

10.0 courses:

0.5 course: Biochemistry 2280A.

2.0 courses: Biology 2290F/G, Biology 2382A/B, Biology 2581A/B, Biology 3596A/B.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

1.0 course: Chemistry 2213A/B and Chemistry 2223B.

1.5 courses: Biochemistry 3380G, Biochemistry 3381A, Biochemistry 3382A.

1.0 course from: Biology 3594A/B, Biology 3595A/B, Biology 3597A/B, Biology 3598A/B.

0.5 course from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B.

1.5 courses from: Biology 4289A/B, Biology 4510F/G, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B, Biology 4970F/G, ~~the former Microbiology and Immunology 4700B.~~

1.0 course: Biochemistry 4410A and Biochemistry 4420A.

0.5 course from: Biochemistry 4415B, Biochemistry 4450A, Biochemistry 4463B, the former Biochemistry 4435B, the former Biochemistry 4445F.

Note:

1. Biochemistry 3381A and Biochemistry 3382A requires a minimum mark of 65% in Biochemistry 2280A, and a minimum mark of 60% in each of Chemistry 2213A/B and Chemistry 2223B.

2. For progression into third year of this module, students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G.

2. ~~Biology 3596A/B requires a minimum mark of 70% in each of Biology 2581A/B and Biology 2290F/G.~~

~~Students having a minimum mark of 70% in Biochemistry 2280A will be given priority in registration for Biochemistry 3380G.~~

MAJOR IN ECOSYSTEM HEALTH

Module

6.0 courses:

2.0 courses: Biology 2290F/G, Biology 2483A/B, Biology 2485A/B, Biology 3484A/B, Biology 4218A/B.

0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B.

1.0 courses from: Biology 3442F/G, Chemistry 2210A/B, Environmental Science 3300F/G.

1.0 courses from: Biology 4223F/G, Geography 2133A/B, Microbiology and Immunology 2500A/B, Microbiology and Immunology 3500B.

0.5 course from: Geography 2430A/B, Geography 3431A/B, Pathology 3500*, Pathology 4400A/B, Sociology 2246A/B, the former Biology 4243F/G.

1.0 course: Biology 4230A/B, Biology 4405F/G **A/B**.

MAJOR IN GENETICS

Admission Requirements

Completion of first year requirements with no failures including a minimum mark of 60% in each of Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B. Chemistry 1301A/B and Chemistry 1302A/B, ~~or the former Chemistry 1100A/B and the former Chemistry 1200B.~~

0.5 course from: Physics 1028A/B, Physics 1301A/B or Physics 1501A/B.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B or the former Calculus 1100A/B, the former Linear Algebra 1600A/B. If not completed in first year, the Mathematics requirement must be completed by the end of second year.

Module

6.0 courses:

0.5 course: Biochemistry 2280A.

1.5 courses: Biology 2290F/G, Biology 2382A/B, Biology 2581A/B.

0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B.

0.5 course: Biology 3596A/B.

0.5 courses from: Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

1.5 courses (not already taken above) from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

1.0 course from: Biology 4289A/B, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B, the former Microbiology and Immunology 4700B.

Notes:

1. In addition to the normal progression requirements for a Major in Genetics, students must obtain a minimum mark of 70% in each of Biology 2581A/B, Biology 2290F/G before taking Biology 3595A/B or Biology 3596A/B.

1. For progression into third year of this module, students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G.

2. For progression in this module, students must obtain a minimum of 70% in Biology 3596A/B.

3. A degree containing this module normally requires 4 years to complete.

MINOR IN GENETICS

Admission Requirements

Completion of first-year requirements, including a minimum mark of 60% in each of Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B. Chemistry 1301A/B and Chemistry 1302A/B or the former Chemistry 1100A/B and the former Chemistry 1200B.

Module

4.0 courses:

1.5 courses: Biochemistry 2280A, Biology 2290F/G, Biology 2581A/B.

2.5 courses from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3596A/B, Biology 3597A/B, Biology 3598A/B, Biology 4289A/B, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B.

Notes:

1. Biology 3595A/B requires a minimum mark of 70% in Biology 2581A/B.

2. For progression into third year of this module, students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G. Biology 3596A/B requires a minimum mark of 70% in each of Biology 2581A/B and Biology 2290F/G.

3. Many 4000 level Biology courses require the completion of 1.5 Biology courses at the 3000 level or above.

CHEMISTRY

Effective **September 1, 2019**, the following courses be withdrawn.

Chemistry 4404A/B RADIATION & NUCLEAR SYSTEMS CHEMISTRY
Chemistry 4441A/B INORGANIC MACROMOLECULES

Effective **September 1, 2019**, the following modules be revised.

HONORS SPECIALIZATION IN CHEMISTRY

Module

10.0 courses:

6.0 courses: Chemistry 2271A, Chemistry 2272F, Chemistry 2273A, Chemistry 2374A, Chemistry 2281G, Chemistry 2283G, Chemistry 2384B, Chemistry 3370A/B, Chemistry 3371F, Chemistry 3372F/G, Chemistry 3373F, Chemistry 3374A/B.

0.5 course from: Biochemistry 2280A, Chemistry 3391A/B, Chemistry 4493A/B.

2.0 courses from: (at least 1.0 of which must be at the 4000 level, or 0.5 course at the 4000 level if Chemistry 4493A/B is chosen from the list above) from: Chemistry 3300F/G, Chemistry 3320A/B, Chemistry 3330F/G, Chemistry 3364A/B, Chemistry 3391A/B, Chemistry 3393A/B, Chemistry 4400A/B, Chemistry 4404A/B, Chemistry 4415B, Chemistry 4441A/B, Chemistry 4444A/B, Chemistry 4471A/B, Chemistry 4472A/B, Chemistry 4473A/B, Chemistry 4474A/B, Chemistry 4481A/B, Chemistry 4483A/B, Chemistry 4493A/B, Chemistry 4494A/B, Applied Mathematics 2402A, Applied Mathematics 2811B, Applied Mathematics 2814F/G, Calculus 2302A/B, Calculus 2303A/B, the former Applied Mathematics 2813A/B, the former Chemistry 3384F/G, or the former Chemistry 4466B Chemistry courses at the 3000 level or above (at least 1.0 of which must be at the 4000 level, or 0.5 course at the 4000 level if Chemistry 4493A/B is chosen from the list above), Applied Mathematics 2402A, Applied Mathematics 2811B, Applied Mathematics 2814F/G, Calculus 2302A/B, Calculus 2303A/B.

1.5 course: Chemistry 4491E.

SPECIALIZATION IN CHEMISTRY

Module

10.0 courses:

6.0 courses: Chemistry 2271A, Chemistry 2272F, Chemistry 2273A, Chemistry 2374A, Chemistry 2281G, Chemistry 2283G, Chemistry 2384B, Chemistry 3370A/B, Chemistry 3371F, Chemistry 3372F/G, Chemistry 3373F, Chemistry 3374A/B.

0.5 course from: Biochemistry 2280A, Chemistry 3391A/B, Chemistry 4493A/B.

2.0 courses from: (at least 1.0 of which must be at the 4000 level, or 0.5 course at the 4000 level if Chemistry 4493A/B is chosen from the list above) from: Chemistry 3300F/G, Chemistry 3320A/B, Chemistry 3330F/G, Chemistry 3364A/B, Chemistry 3391A/B, Chemistry 3393A/B, Chemistry 4400A/B, Chemistry 4404A/B, Chemistry 4415B, Chemistry 4441A/B, Chemistry 4444A/B, Chemistry 4471A/B, Chemistry 4472A/B, Chemistry 4473A/B, Chemistry 4474A/B, Chemistry 4481A/B, Chemistry 4483A/B, Chemistry 4493A/B, Chemistry 4494A/B, Applied Mathematics 2402A, Applied Mathematics 2811B, Applied Mathematics 2814F/G, Calculus 2302A/B, Calculus 2303A/B, the former Applied Mathematics 2813A/B, the former Chemistry 3384F/G or the former Chemistry 4466B Chemistry courses at the 3000 level or above (at least 1.0 of which must be at the 4000 level, or 0.5 course at the 4000 level if Chemistry 4493A/B is chosen from the list above), Applied Mathematics 2402A, Applied Mathematics 2811B, Applied Mathematics 2814F/G, Calculus 2302A/B, Calculus 2303A/B.

1.5 course: Chemistry 4491E.

MINOR IN ADVANCED CHEMISTRY

Module

4.0 courses:

4.0 courses from: (at least 2.0 of which must be at the 4000 level) from among the following courses not already taken: ~~Chemistry 3300F/G, Chemistry 3320A/B, Chemistry 3330F/G, Chemistry 3364A/B, Chemistry 3391A/B, Chemistry 3393A/B, Chemistry 4400A/B, Chemistry 4415B, Chemistry 4441A/B, Chemistry 4444A/B, Chemistry 4471A/B, Chemistry 4472A/B, Chemistry 4473A/B, Chemistry 4474A/B, Chemistry 4481A/B, Chemistry 4483A/B, Chemistry 4493A/B, Chemistry 4494A/B, or the former Chemistry 3384F/G, the former Chemistry 4466B~~ **Chemistry courses at the 3000 level or above not already taken (at least 2.0 of which must be at the 4000 level).**

Up to 1.0 course may be chosen from: Applied Mathematics 2402A or the former Differential Equations 2402A, Applied Mathematics 2811B, Applied Mathematics 2814F/G, Calculus 2302A/B, Calculus 2303A/B, or the former Applied Mathematics 2813A/B.

ENVIRONMENTAL SCIENCE

Effective **September 1, 2019**, the following modules be revised to reflect the suffix change to **Biology 4405A/B**.

HONORS SPECIALIZATION IN ENVIRONMENTAL SCIENCE

Module

9.0 courses:

0.5 course: Biology 2483A/B.

0.5 course: Chemistry 2210A/B.

1.0 course: Environmental Science 3300F/G, Environmental Science 3350F/G.

0.5 course: Biology 2244A/B or Statistical Sciences 2244A/B. Students may substitute Psychology 2810 for this 0.5 course. and if so, the module will be 9.5 courses.

0.5 course: Geography 2220A/B (strongly recommended) or a Geography half-course from the Environmental Science Course List.

0.5 course at the 2000-level from Earth Sciences courses in the Environmental Physical Sciences Subject Courses List.

1.5 course: Environmental Science 4999E.

0.5 course from: Environmental Science 4949F/G, Biology 4230A/B, Biology 4405F/G **A/B**, Biology 4410F/G, Biology 4412F/G, Earth Sciences 4431A/B, Earth Sciences 4440A/B.

2.5 additional courses from the Environmental Science Course List, including at least 0.5 course from each of the 3 subject areas.

1.0 additional course at the 3000 level or above from the Environmental Science Course List.

SPECIALIZATION IN ENVIRONMENTAL SCIENCE

Module

9.0 courses:

0.5 course: Biology 2483A/B.

0.5 course: Chemistry 2210A/B.

1.0 course: Environmental Science 3300F/G, Environmental Science 3350F/G.

0.5 course: Biology 2244A/B or Statistical Sciences 2244A/B. Students may substitute Psychology 2810 for this 0.5 course, and if so, the module will be 9.5 courses.

0.5 course: Geography 2220A/B (strongly recommended) or a Geography half-course from the Environmental Science Course List

0.5 course at the 2000-level from Earth Sciences courses in the Environmental Physical Science Courses List.

0.5 course from: Environmental Science 4949F/G, Environmental Science 4970F/G, Biology 4230A/B, Biology 4405F/G **A/B**, Biology 4410F/G, Biology 4412F/G, Earth Sciences 4431A/B, Earth Sciences 4440A/B.

2.5 additional courses from the Environmental Science Course List, including at least 0.5 course from each of the 3 subject areas.

2.5 additional courses at the 3000 level or above from: Environmental Science 4970F/G or the Environmental Science Course List.

INTEGRATED SCIENCE

Effective **September 1, 2019**, the following course be revised.

Integrated Science 4001A/B **Y PEER MENTORING AND LEADERSHIP**

Extra Information: ~~3 lecture hours~~ **1 lecture hour**. Pass/Fail.

Effective **September 1, 2019**, the following modules be revised.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH ASTROPHYSICS

Module

13.0 courses:

2.5 courses: Integrated Science 2001F*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001A/B **Y*****.

0.5 course from*: Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

1.0 course: Calculus 2502A/B (preferred) or Calculus 2302A/B, Calculus 2503A/B (preferred) or Calculus 2303A/B.

0.5 course: Applied Mathematics 2402A.

3.5 courses: Physics 2101A/B, Physics 2102A/B, Physics 2110A/B, Physics 2910F/G, Physics 3300A/B, Physics 3926F/G, Physics 4351A/B.

0.5 course from: Physics 3151A/B, Physics 3200A/B, Physics 3400A/B.

2.0 courses: Astronomy 2201A/B, Astronomy 2801A/B.

1.0 courses from: Astronomy 3302A/B, Astronomy 3303A/B, Astronomy 4101A/B, Astronomy 4602A/B.

0.5 courses from: any Physics and Astronomy course not yet taken numbered 4000 or above.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH BIOLOGY

Module

13.0 courses:

2.5 courses: Integrated Science 2001F**, Integrated Science 2002B**, Integrated Science 3001F/G***, Integrated Science 3002A/B***, Integrated Science 4001A/B **Y******.

0.5 course from**: Philosophy 2320F/G (preferred), ~~Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.~~

0.5 course: Science 3377A/B***.

1.5 course: Integrated Science 4999E****.

0.5 course: Biochemistry 2280A.

2.5 courses: Biology 2290F/G, Biology 2382A/B, Biology 2483A/B, Biology 2581A/B, Biology 2601A/B.

0.5 course: Chemistry 2213A/B.

0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B.

4.0 additional courses at the 3000 level or above, chosen from the Department of Biology and the Basic Medical Sciences disciplines*, of which at least 3.0 courses must be chosen from the Department of Biology. At least 1.5 of these 4.0 courses must have a laboratory component.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH CHEMISTRY

Module

13.0 courses:

2.5 courses: Integrated Science 2001F*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001A/B~~Y~~***.

0.5 course from*: Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

6.0 courses: Chemistry 2271A, Chemistry 2272F, Chemistry 2273A, Chemistry 2374A, Chemistry 2281G, Chemistry 2283G, Chemistry 2384B, Chemistry 3370A/B, Chemistry 3371F, Chemistry 3372F/G, Chemistry 3373F, Chemistry 3374A/B.

0.5 course: Chemistry 3391A/B or Chemistry 4493A/B.

1.5 courses from: (at least 1.0 of which must be at the 4000 level, or 0.5 course at the 4000 level if Chemistry 4493A/B is chosen from the list above) from: ~~Chemistry 3300F/G, Chemistry 3320A/B, Chemistry 3330F/G, Chemistry 3364A/B, Chemistry 3391A/B, Chemistry 3393A/B, Chemistry 4400A/B, Chemistry 4404A/B, Chemistry 4441A/B, Chemistry 4444A/B, Chemistry 4471A/B, Chemistry 4472A/B, Chemistry 4473A/B, Chemistry 4474A/B, Chemistry 4481A/B, Chemistry 4483A/B, Chemistry 4493A/B, Chemistry 4494A/B, the former Chemistry 4466B~~ Chemistry courses at the 3000 level or above (at least 1.0 of which must be at the 4000 level, or 0.5 course at the 4000 level if Chemistry 4493A/B is chosen from the list above).

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH COMPUTER SCIENCE

Module

13.0 courses:

2.5 courses: Integrated Science 2001F*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001A/B~~Y~~***.

0.5 course from*: Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

0.5 course: Computer Science 2121A/B.

3.5 courses: Computer Science 2208A/B, Computer Science 2209A/B, Computer Science 2210A/B, Computer Science 2211A/B, Computer Science 2212A/B/Y, Computer Science 3305A/B, Computer Science 3307A/B/Y.

0.5 course from: Computer Science 2214A/B, Mathematics 2155F/G or the former Mathematics 2155A/B.

3.5 additional courses from: Mathematics 2156A/B, Computer Science courses at the 3000 level or above.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH EARTH SCIENCES

Module

13.0 courses:

2.5 courses: Integrated Science 2001F**, Integrated Science 2002B**, Integrated Science

3001F/G***, Integrated Science 3002A/B***, Integrated Science 4001A/B~~Y~~****.

0.5 course from:** Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B***.

1.5 course: Integrated Science 4999E****.

3.0 courses: Earth Sciences 2200A/B, Earth Sciences 2201A/B, Earth Sciences 2206A/B, Earth Sciences 2250Y, Earth Sciences 2260A/B, Earth Sciences 2265A/B.

0.5 course from: Earth Sciences 3313A/B, Earth Sciences 3314A/B, Earth Sciences 3315A/B.

1.0 course from: Earth Sciences 2123F/G*, Earth Sciences 2130Y, Earth Sciences 2220A/B, Earth Sciences 2230A/B, Earth Sciences 2240F/G or Earth Sciences 2241A/B.

1.5 additional courses in Earth Sciences at the 2000 level or above.

2.0 additional courses in Earth Sciences at the 3000 level or above.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH ENVIRONMENTAL SCIENCE

Module

13.0 courses:

2.5 courses: Integrated Science 2001F*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001A/B~~Y~~***.

0.5 course from*: Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

0.5 course: Biology 2483A/B.

0.5 course: Chemistry 2210A/B.

1.0 course: Environmental Science 3300F/G, Environmental Science 3350F/G.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

0.5 course: Geography 2220A/B (strongly recommended) or a Geography half-course from the Environmental Science Course List.

0.5 course at the 2000-level from Earth Sciences courses in the Environmental Physical Science Courses List.

0.5 course from: Environmental Science 4949F/G, Biology 4230A/B, Biology 4405F/G~~A/B~~, Biology 4410F/G, Biology 4412F/G, Earth Sciences 4431A/B, Earth Sciences 4440A/B.

2.5 additional courses from Environmental Science 4970F/G or the Environmental Science Course List, including at least 0.5 course from each of the 3 subject areas.

1.5 additional courses at the 3000 level or above from the Environmental Science Course List.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH GENETICS

Module

13.0 courses:

2.5 courses: Integrated Science 2001F*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001A/B~~Y~~***.

0.5 course from*: Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

1.5 courses: Biology 2290F/G, Biology 2382A/B, Biology 2581A/B.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B

0.5 course: Biochemistry 2280A.

0.5 course: Biology 3596A/B.

0.5 courses from: Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

1.5 courses (not already taken above) from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

1.0 course from: Biology 4289A/B, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B.

0.5 course: Biology 4583F/G or the former Biology 4582.

1.5 additional courses from Biology listed above but not already taken.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH MATHEMATICAL AND STATISTICAL SCIENCES

Module

13.0 courses:

2.5 courses: Integrated Science 2001F*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001A/BY***.

0.5 course from*: Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

0.5 course: Mathematics 2120A/B or Applied Mathematics 2811B.

5.0 courses: Applied Mathematics 2402A, Applied Mathematics 2814F/G, Applied Mathematics 3815A/B, Calculus 2502A/B, Calculus 2503A/B, Mathematics 2122A/B, Mathematics 2155F/G, Mathematics 3020A/B, Statistical Sciences 2857A/B, Statistical Sciences 2858A/B.

1.0 additional course in Actuarial Science, Financial Modeling or Statistical Sciences at the 2100 level or above.

1.5 courses at the 3000 level or above from Actuarial Sciences, Applied Mathematics, Financial Modelling, Mathematics, or Statistical Sciences.

HONORS SPECIALIZATION IN INTEGRATED SCIENCE WITH PHYSICS

Module

13.0 courses:

2.5 courses: Integrated Science 2001F*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001A/BY***.

0.5 course from*: Philosophy 2320F/G (preferred), Philosophy 2033A/B, Philosophy 2035F/G, Philosophy 2078F/G, Philosophy 2370F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

1.0 course: Calculus 2502A/B (preferred) or Calculus 2302A/B, Calculus 2503A/B (preferred) or Calculus 2303A/B.

0.5 course: Applied Mathematics 2402A.

2.0 courses: Physics 2101A/B, Physics 2102A/B, Physics 2110A/B, Physics 2910F/G.

1.0 course from: Astronomy 2201A/B, Astronomy 2801A/B, Physics 2810A/B, the former Physics 2600A/B.

0.5 course from: Physics 3900F/G/Z, Physics 3926F/G.

1.0 course from: Physics 3151A/B, Physics 3200A/B, Physics 3300A/B, Physics 3400A/B.

2.0 additional courses from: Applied Mathematics 3815A/B, any Physics or Astronomy course not yet taken numbered 3000 or above.

MEDICAL BIOPHYSICS

Effective **September 1, 2019**, the following course be introduced.

MEDICAL BIOPHYSICS 4700B – CASE STUDIES IN MEDICAL BIOPHYSICS

Short title: CASE STUDIES IN MED BIOPHYS

Case studies will highlight specific issues that medical biophysics covers while introducing important concepts and the multidisciplinary nature of research, professionals, and applications in the field. The key themes are cardiovascular and circulatory health, molecular and cellular

imaging for research, diagnostic imaging in humans, cancer radiotherapy, and medical images processing.

Prerequisite(s): Registration in Year 4 of an Honors degree that contains a module offered by the Department of Medical Biophysics or, with special permission, registration in Year 4 of a BESC degree or an Honors BHSc, BMSc or BSc degree.

Extra Information: 3 lecture hours.

Course Weight: 0.5

Effective **September 1, 2019**, the following modules be revised.

HONORS SPECIALIZATION IN MEDICAL BIOPHYSICS (Biological Science Concentration)

Module

9.5 **10.0** courses:

0.5 course: Biochemistry 2280A.

1.0 course from: Biology 2290F/G, Biology 2382A/B, Biology 2581A/B.

0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B.

0.5 course: Chemistry 2213A/B.

0.5 course: Computer Science 2035A/B.

3.0 courses: Medical Biophysics 3330F/G, Medical Biophysics 3501A, Medical Biophysics 3503G, Medical Biophysics 3505F, Medical Biophysics 3507G, Medical Biophysics 3970Z.

1.0 course: Physiology 2130.

4.0 1.5 courses from: Medical Biophysics 4455A/B, Medical Biophysics 4467A/B, Medical Biophysics 4475A/B, Medical Biophysics 4535A/B, **Medical Biophysics 4700B**.

1.5 courses: Medical Biophysics 4970E (Research Project = 1.5 courses).

HONORS SPECIALIZATION IN MEDICAL BIOPHYSICS (Medical Science Concentration)

Module

9.5 **10.0** courses:

0.5 course: Biochemistry 2280A.

0.5 course: Chemistry 2213A/B.

0.5 course: Computer Science 2035A/B.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

0.5 course from: Biology 2290F/G, Biology 2382A/B, Biology 2581A/B, Chemistry 2214A/B, Medical Biophysics 3336F/G.

1.0 course from: Physics 2101A/B and Physics 2102A/B, Physiology 2130 or Physiology 3120.

3.5 courses: Medical Biophysics 3330F/G, Medical Biophysics 3501A, Medical Biophysics 3503G, Medical Biophysics 3505F, Medical Biophysics 3507G, Medical Biophysics 3645A/B, Medical Biophysics 3970Z.

4.0 1.5 courses from: Medical Biophysics 4445A/B, Medical Biophysics 4455A/B, Medical Biophysics 4467A/B, Medical Biophysics 4475A/B, Medical Biophysics 4535A/B, **Medical Biophysics 4700B**.

1.5 courses: Medical Biophysics 4970E (Research Project = 1.5 courses).

Notes:

1. Some modular courses include a mark requirement in their prerequisite(s). See UNDERGRADUATE COURSE INFORMATION.

2. See the Weighted Average Chart (MODULES OFFERED IN THE BMSc PROGRAM) for information about admission to the Honors Specialization modules in Year 4, including which modular courses must be completed prior to Year 4.

BRESCIA UNIVERSITY COLLEGE

FRENCH

Effective **September 1, 2019**, the following course be introduced and revised at both campuses.

French 1003A/B INTENSIVE FRENCH

Grammar, composition, oral practice. This accelerated (0.5) course is designed for students having a limited knowledge of French who are too advanced for French 1002.

Antirequisite(s): ~~The former French 1101~~, French 1002, Ontario Grade 11 French (Core, Extended or Immersion) or equivalent.

Prerequisite(s): Permission of Department of French Studies based on French Placement Test.

Extra Information: 4 lecture/tutorial/laboratory hours.

(Main, **Brescia**)

Effective **September 1, 2019**, the following courses be introduced.

French 1011A/B INTERMEDIATE FRENCH

Grammar review, composition, translation, oral practice. This accelerated (0.5) course is designed for students having a limited knowledge of French who are too advanced for French 1010.

Antirequisite(s): French 1010, 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 French 1003A/B or permission of the Department of French Studies.

Extra Information: 4 lecture/tutorial/laboratory hours.

Course Weight: 0.50

(Main, **Brescia**)

French 3205A/B BUSINESS COMMUNICATION IN FRENCH

After learning the general terminology of business correspondence, students will enhance their written and oral expression through the study of business practices, advertising, economic and business topics and professional terminology with authentic materials such as newspapers, Internet and magazines' articles and radio shows.

Antirequisite(s): French 3200, French 3201E.

Prerequisite(s): French 2900 or equivalent.

Extra Information: 3 lecture/tutorial/laboratory hours.

Course Weight: 0.50

(Brescia)

DAP UPDATE: MINOR CHANGES

FACULTY OF ARTS AND HUMANITIES

ENGLISH

Effective **September 1, 2019**, the following course be revised.

English 1022E ENRICHED INTRODUCTION TO ENGLISH LITERATURE

Extra Information: 3 hours. ~~Note: Students who successfully complete English 1022E and who enroll in the Honors Specialization module are exempt from the former English 2307E. However, they must replace it with another 1.0 English course numbered 2200 or above to meet the total of 10.0 courses required for this module.~~

VISUAL ARTS

Effective **September 1, 2019**, the following courses be revised.

Studio Art 3611 DRAWING

Extra Information: 4 studio hours, ~~2 tutorial hours~~. Note: Some sessions may involve drawing from the nude (female or male) as a required component of the course. Priority will be given to students registered in a Visual Arts program.

Studio Art 3623 PAINTING

Extra Information: 4 studio hours, ~~2 tutorial hours~~. Note: Some sessions may involve drawing from the nude (female or male) as a required component of the course. Priority will be given to students registered in a Visual Arts program.

FACULTY OF SOCIAL SCIENCE

INDIGENOUS STUDIES

Effective **September 1, 2019**, the following courses be revised.

Indigenous Studies 1020E INTRODUCTION TO FIRST NATIONS INDIGENOUS STUDIES

An interdisciplinary survey of First Nations **Indigenous** issues, from academic and community perspectives including indigenous knowledge, historical background, oral history, socio-political context, arts, language and culture. Specific practical examples will be explored by researchers and community members actually engaged in their contemporary documentation and resolution.

Indigenous Studies 2204E SELECTED TOPICS IN FIRST NATIONS INDIGENOUS STUDIES

Indigenous Studies 2205E SELECTED TOPICS IN FIRST NATIONS INDIGENOUS STUDIES
Indigenous Studies 2251F/G SELECTED TOPICS IN FIRST NATIONS INDIGENOUS STUDIES

Indigenous Studies 3001F/G SPECIAL TOPICS IN FIRST NATIONS INDIGENOUS STUDIES

Special topics of current interest in the First Nations. List of special topics may be available in the Program office.

Indigenous Studies 3002E SPECIAL TOPICS IN FIRST NATIONS INDIGENOUS STUDIES

Special topics of interest in First Nations Studies. List of topics may be available in the Program's office.

Indigenous Studies 3011F/G SUPERVISED READINGS IN INDIGENOUS STUDIES

This individualized reading course allows students to focus on a topic relevant to Indigenous peoples in Canada. Each student must make arrangements with a Professor in the ~~First Nations~~ **Indigenous** Studies program. An application must be completed with approval from the Instructor and the Director. Applications are available in the ~~First Nations~~ **Indigenous** Studies office.

Indigenous Studies 3722F/G FIRST NATIONS INDIGENOUS POLITICAL AND LEGAL ISSUES

Political and legal issues are inseparable in contemporary examinations of land use, self-determination, governance, individual and community rights. This course will examine the legal institutions and practices of traditional ~~First Nations~~ **Indigenous** cultures as well as contemporary practice.

Indigenous Studies 3880F/G FIRST NATIONS INDIGENOUS LITERATURES

**Indigenous Studies 4001F/G ADVANCED SPECIAL TOPICS IN FIRST NATIONS
INDIGENOUS STUDIES**

Special topics of current interest in First Nations Indigenous Studies. List of special topics may be available from the First Nations Indigenous Studies office.

Indigenous Studies 4011F/G SUPERVISED READING

This individualized reading course allows students to focus on a topic relevant to Indigenous peoples in Canada. Each student must make arrangements with an instructor in the First Nations Indigenous Studies program. An application must be completed with approval from the Instructor and the Director. Applications are available in the First Nations Indigenous Studies office.

Indigenous Studies 4022E FIELD SCHOOL IN FIRST NATIONS INDIGENOUS STUDIES

An advanced seminar course combining in-class discussions of theoretical texts, research papers alongside community-based research. Students will be trained in appropriate methodologies and ethics of working with First Nations Indigenous Communities. Areas of research and instruction may include land claims, self-government, education, health care, and urban issues.

**Indigenous Studies 4023F/G COMMUNITY-BASED RESEARCH IN FIRST NATIONS
INDIGENOUS STUDIES**

This is an advanced community-based experiential course that combines in-class discussions with community based research. Students will train in methodologies and ethics of working with First Nations Indigenous communities. Areas of research may include but not limited to ecological restoration, land claims, self-government, education, health and wellness and urban issues.