# Plans of study for students who were admitted to a Biology Plan after May 1, 2016

**BIOL-M-BSH**

**Subject:** Administered by the Department of Biology.

**Plan:** Consists of 72.0 units as described below.

**Program:** The Plan, alone, or in combination with a Minor in another subject, and with sufficient electives to total 120.0 units, will lead to a Bachelor of Science (Honours) Degree.

## Code | Title |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Core</strong></td>
<td></td>
</tr>
<tr>
<td>Biology:</td>
<td></td>
</tr>
<tr>
<td>BIOL 102</td>
<td>Fundamentals of Biology: Molecular and Cell Biology</td>
</tr>
<tr>
<td>BIOL 103</td>
<td>Fundamentals of Biology: Organisms to Ecosystems</td>
</tr>
<tr>
<td>B. Select 12.00 units from the following:</td>
<td>12.00</td>
</tr>
<tr>
<td>BIOL 200</td>
<td>Diversity Of Life</td>
</tr>
<tr>
<td>BIOL 205</td>
<td>Mendelian and Molecular Genetics</td>
</tr>
<tr>
<td>BIOL 206</td>
<td>Evolutionary Genetics</td>
</tr>
<tr>
<td>BIOL 212</td>
<td>Scientific Methods in Biology</td>
</tr>
<tr>
<td>C. Select 3.00 units from the following:</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 300</td>
<td>Ecology</td>
</tr>
<tr>
<td>D. Select 3.00 units from the following:</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 339</td>
<td>Animal Physiology</td>
</tr>
<tr>
<td>BIOL 334</td>
<td>Comparative Biochemistry</td>
</tr>
<tr>
<td>BIOL 341</td>
<td>Plant Physiology</td>
</tr>
<tr>
<td>E. Complete the following:</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 330</td>
<td>Cell Biology</td>
</tr>
<tr>
<td><strong>2. Option</strong></td>
<td></td>
</tr>
<tr>
<td>A. CHEM at the 200 level or above</td>
<td>3.00</td>
</tr>
<tr>
<td>B. Select 27.0 units from the following seminar or research options:</td>
<td>27.00</td>
</tr>
<tr>
<td>i. Seminar Option:</td>
<td></td>
</tr>
<tr>
<td>a. 6 units from BIOL at the 400 level or above</td>
<td></td>
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<tr>
<td>b. 12.00 units from the following:</td>
<td></td>
</tr>
<tr>
<td>BIOL at the 300 level or above</td>
<td></td>
</tr>
<tr>
<td>BIOL_Subs_A</td>
<td></td>
</tr>
<tr>
<td><strong>3. Supporting</strong></td>
<td></td>
</tr>
<tr>
<td>A. Complete the following:</td>
<td></td>
</tr>
<tr>
<td>CHEM 112</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>B. Select 6.00 units from the following:</td>
<td>6.00</td>
</tr>
<tr>
<td>MATH 120</td>
<td>Differential and Integral Calculus</td>
</tr>
<tr>
<td>MATH 121</td>
<td>Differential and Integral Calculus</td>
</tr>
<tr>
<td>MATH 123</td>
<td>Differential and Integral Calculus I &amp; MATH 124 and Differential and Integral Calculus II</td>
</tr>
</tbody>
</table>

**Elective**

Elective Courses 48.00

**Total Units** 120.00

## 4. Substitutions

A. BCHM 310 General Biochemistry (or the combination of BCHM 315 Proteins and Enzymes and BCHM 316 Metabolism) may be substituted for 3.0 units from (BIOL 339 Animal Physiology or BIOL 341 Plant Physiology or BIOL 334 Comparative Biochemistry) with the remaining units applied toward Option Course requirements in the degree program.

B. MATH 126 Differential and Integral Calculus may be substituted for Supporting Courses 3.B. with prior approval from the Chair of Undergraduate Studies in the Department of Biology.

C. Students registered in a BIOL Plan prior to May 1, 2016 may use BCHM 218 Molecular Biology as an alternative to BIOL 330 Cell Biology to satisfy requirement 1.E.
5. Notes

A. PHYS 117 Introductory Physics (or PHYS 104 Fundamental Physics or PHYS 106 General Physics or PHYS 118 Basic Physics) is highly recommended but not required.

B. A maximum of 6.0 units from courses offered by other Faculties and Schools may be counted toward the program and/or Plan Requirements. This includes courses in BMED, Comm, GLPH, LAW, NURS and courses in the Faculty of Engineering and Applied Science.

Biology Course Lists

The following lists contain courses offered through other Departments. In accordance with Academic Regulation 2.5 (Access to Classes), students do not have enrolment priority in all of these courses. Access to these courses may only be made available during the Open Enrolment period, and then only if space permits.

**Biology Substitutions List A**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT</td>
<td>at the 300 level and above</td>
<td></td>
</tr>
<tr>
<td>BCHM</td>
<td>at the 300 level and above</td>
<td></td>
</tr>
<tr>
<td>MICR</td>
<td>221   Basic Microbiology</td>
<td>3.00</td>
</tr>
<tr>
<td>MICR</td>
<td>271   Introduction to Microbiology</td>
<td>3.00</td>
</tr>
<tr>
<td>MICR</td>
<td>at the 300 level and above</td>
<td></td>
</tr>
<tr>
<td>LISC</td>
<td>at the 300 level and above</td>
<td></td>
</tr>
<tr>
<td>PATH</td>
<td>at the 300 level and above</td>
<td></td>
</tr>
<tr>
<td>PHGY</td>
<td>at the 300 level and above</td>
<td></td>
</tr>
</tbody>
</table>

**Biology Substitutions List B**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>APSC</td>
<td>400   Technology, Engineering &amp; Management (TEAM)</td>
<td>7.00</td>
</tr>
<tr>
<td>CHEE</td>
<td>400   Technology, Engineering &amp; Management (TEAM)</td>
<td>7.00</td>
</tr>
<tr>
<td>CHEM</td>
<td>at the 200 level and above</td>
<td></td>
</tr>
<tr>
<td>ENSC</td>
<td>301   Environmental Assessment</td>
<td>3.00</td>
</tr>
<tr>
<td>ENSC</td>
<td>307   Marine Environmental Issues</td>
<td>3.00</td>
</tr>
<tr>
<td>ENSC</td>
<td>320   Wildlife Issues in a Changing World</td>
<td>3.00</td>
</tr>
<tr>
<td>ENSC</td>
<td>390   Sustainability</td>
<td>3.00</td>
</tr>
<tr>
<td>ENSC</td>
<td>425   Ecotoxicology</td>
<td>3.00</td>
</tr>
<tr>
<td>ENSC</td>
<td>471   Environmental Analysis Methods</td>
<td>3.00</td>
</tr>
<tr>
<td>EPID</td>
<td>301   Principles of Epidemiology</td>
<td>3.00</td>
</tr>
<tr>
<td>GEOL</td>
<td>337   Paleontology</td>
<td>3.00</td>
</tr>
<tr>
<td>GEOL</td>
<td>466   Isotopes and the Environment</td>
<td>3.00</td>
</tr>
</tbody>
</table>

GPHY 304 Northern and Arctic Environments 3.00
GPHY 306 Natural Environmental Change 3.00
GPHY 310 Landscape Ecology 3.00
GPHY 314 Climate Change 3.00
GPHY 315 Advanced Field Measurements and their Analysis 3.00
GPHY 318 Advanced Biogeography 3.00
GPHY 339 Medical Geography 3.00
HLTH 323 Epidemiology 3.00
PHAR 340 Principles of General Pharmacology I 3.00
PHAR 370 Fundamentals of Pharmacology and Therapeutics 3.00
PHIL 301 Bioethics 3.00
PSYC 235 Abnormal Psychology 6.00
PSYC 236 Introduction to Clinical Psychology 3.00
PSYC 271 Brain and Behaviour I 3.00
PSYC 370 Brain and Behaviour II 3.00
PSYC 470 Advanced Topics in Behavioural Neuroscience 3.00
STAT 353 Probability II 3.00