

# BIOLOGY – MAJOR (SCIENCE) – BACHELOR OF SCIENCE (HONOURS)

## BIOL-M-BSH

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

**Plan:** Consists of 72.00 units as described below.

**Program:** The Plan, alone, or in combination with a Minor in another subject, and with sufficient electives to total 120.00 units, will lead to a Bachelor of Science (Honours) Degree.

Code	Title	Units
<b>1. Core</b>		
<b>A. Complete the following:</b>		
BIOL 102	Fundamentals of Biology: Molecular and Cell Biology	3.00
BIOL 103	Fundamentals of Biology: Organisms to Ecosystems	3.00
<b>B. Complete the following:</b>		
BIOL 200	Diversity of Life	3.00
BIOL 205	Mendelian and Molecular Genetics	3.00
BIOL 206	Evolutionary Genetics	3.00
BIOL 212	Scientific Methods in Biology	3.00
<b>C. Complete the following:</b>		
BIOL 300	Ecology	3.00
<b>D. Complete 3.00 units from the following: 3.00</b>		
BIOL 334	Comparative Biochemistry	
BIOL 339	Animal Physiology	
BIOL 341	Plant Physiology	
<b>E. Complete the following:</b>		
BIOL 330	Cell Biology	3.00
<b>F. Complete 3.00 units from the following: 3.00</b>		
BIOL 243	Introduction to Statistics	
STAT 269	Statistics and Probability II	
<b>2. Option</b>		
<b>A. Complete 3.00 units from the following: 3.00</b>		
CHEM at the 200-level or above		
<b>B. Complete one of the following seminar or research options: 27.00</b>		
<b>i. Seminar Option:</b>		
a. Complete 6.00 units from the following:		
BIOL at the 400-level or above		
b. Complete 12.00 units from the following:		
BIOL at the 300-level or above		
BIOL_Sub_A		
c. Complete 9.00 units from the following:		

BIOL at the 300-level or above		
BIOL_Sub_A		
BIOL_Sub_B		
<b>ii. Research Option:</b>		
a. Complete the following:		
BIOL 537	Research in Biology	
b. Complete 6.00 units from the following:		
BIOL at the 300-level or above		
BIOL_Sub_A		
c. Complete 9.00 units from the following:		
BIOL at the 300-level or above		
BIOL_Sub_A		
BIOL_Sub_B		
<b>3. Supporting</b>		
<b>A. Complete the following:</b>		
CHEM 112	General Chemistry	6.00
<b>B. Complete 6.00 units from the following: 6.00</b>		
MATH 120	Differential and Integral Calculus	
MATH 121	Differential and Integral Calculus	
MATH 123	Differential and Integral Calculus I & MATH 124 and Differential and Integral Calculus II	
<b>Elective</b>		
Elective Courses		48.00
<b>Total Units</b>		<b>120.00</b>

## 4. Substitutions

A. BCHM 310 (or the combination of BCHM 315 and BCHM 316) may be substituted for 3.00 units from (BIOL 334 or BIOL 339 or BIOL 341) with the remaining units applied toward Option Course requirements in the degree program.

B. MATH 126 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 as an alternative to BIOL 330 to satisfy requirement **1.E.**

## 5. Notes

A. PHYS 115 and PHYS 116 (or PHYS 104 or PHYS 106 or PHYS 118) is highly recommended but not required.



B. A maximum of 6.00 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, HSCI, 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 2.6 (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.

### BIOL\_Sub\_A

Code	Title	Units
<b>Biology Substitutions List A</b>		
ANAT at the 300-level and above		
BCHM at the 300-level and above		
MICR 221	Fundamental Microbiology	3.00
MICR 271	Introduction to Microbiology	3.00
MICR at the 300-level and above		
LISC at the 300-level and above		
PATH at the 300-level and above		
PHGY at the 300-level and above		

### BIOL\_Sub\_B

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