

# BIOLOGICAL SCIENCES HONOURS

**Total credits required for Honours – 63 to 84 credits.**

**Note:** Biological Sciences Honours are required to complete BIOL 207, BIOL 208, CHEM 101, CHEM 102, and STAT 151 prior to applying for the Honours program. A minimum grade of B- in BIOL 399 is required to progress in the Honours program.

Course ID	Course Name	Credits
<b>Specific Honours Requirements</b>		
BIOL 107	Introduction to Cell Biology	3
BIOL 108	Organisms in Their Environment	3
BIOL 207	Principles of Genetics	3
BIOL 208	Principles of Ecology	3
CHEM 261	Organic Chemistry I	3
BICM 200	Introductory Biochemistry	3
BIOL 321	Mechanisms of Evolution	3
BIOL 337	Biostatistics and Research Design	3
BIOL 399	Honours Proposal	3
BIOL 499A	Honours Thesis I	3
BIOL 499B	Honours Thesis II	3

Choose either the Molecular/Cellular Honours Stream or the Ecology and Diversity Honours Stream

Total Credits 63-84

## Molecular/Cellular Honours Stream Requirements

Course ID	Course Name	Credits
Choose 30 credits from the following with a minimum of 6 credits at the 400-level:		
BICM 310	Intermediary Metabolism	
BICM 320	Structure and Function of Biomolecules	
BICM 330	Nucleic Acid Biochemistry	
BIOL 201	Eukaryotic Cellular Biology I	
BIOL 205	Principles of Molecular Biology	
BIOL 211	Introduction to Microbiology	
BIOL 300	Eukaryotic Cellular Biology II	
BIOL 313	Animal Developmental Biology	
BIOL 315	History of Biology	
BIOL 323	Introduction to Population Genetics	
BIOL 413	Advanced Animal Developmental Biology	
BIOL 421	Techniques in Molecular and Cellular Biology	
BIOL 430	Pathobiology: The Cellular Basis of Disease	
BIOL 492	Field Placement	
BIOL 495	Special Topics	
GENE 317	Genetics and Society	
GENE 369	Genetic Analysis of Bacteria	
GENE 370	Genetic Analysis of Eukaryotes	
GENE 400	Genome Organization	
GENE 404	Investigations into Gene Regulation	

GENE 418	Human Genetics	
ZOOL 241	Animal Physiology I	
ZOOL 242	Animal Physiology II	
Choose up to 21 credits from the following:		0-21
Junior- and senior-level biological sciences – BICM, BIOL, BOTN, GENE, and ZOOL		
SCIE 201	Scientific Process: From Research Questions to Printed Manuscript	

Total Credits 30-51

## Ecology and Diversity Honours Stream Requirements

Choose 30 credits from the following with a minimum of 6 credits at the 400-level: 30

Course ID	Course Name	Credits
Choose 30 credits from the following with a minimum of 6 credits at the 400-level: 30		
BIOL 310	Freshwater Ecology	
BIOL 312	Terrestrial Ecology	
BIOL 314	Population Ecology	
BIOL 315	History of Biology	
BIOL 316	Community Ecology	
BIOL 323	Introduction to Population Genetics	
BIOL 361	Marine Biology	
BIOL 365	Tropical Rainforest Ecology	
BIOL 367	Conservation Biology	
BIOL 371	Animal Behaviour	
BIOL 410	Techniques in Field Ecology	
BIOL 414	Invasion Ecology and Management	
BIOL 422	Methods in Experimental Ecology	
BIOL 492	Field Placement	
BIOL 495	Special Topics	
BOTN 205	Fundamentals of Plant Biology	
BOTN 305	Plant Responses and Interactions	
ZOOL 224	Vertebrate Adaptations and Evolution	
ZOOL 241	Animal Physiology I	
ZOOL 242	Animal Physiology II	
ZOOL 250	Survey of the Invertebrates	
ZOOL 324	Comparative Anatomy of Vertebrates	
ZOOL 400	Aquatic Vertebrates	
ZOOL 401	Terrestrial Vertebrates	
ZOOL 425	Entomology	
ZOOL 452	Principles of Parasitism	

Choose up to 21 credits from the following: 0-21

Junior- and senior-level biological sciences – BICM, BIOL, BOTN, GENE, and ZOOL		
SCIE 201	Scientific Process: From Research Questions to Printed Manuscript	

Total Credits 30-51