

HONOURS BSC IN BIOLOGY

Recent discoveries and new technologies are revolutionizing the biological sciences, placing increasing emphasis on integrating knowledge across all levels of organization, from molecules to ecosystems. Our programs give students both the intellectual tools and the hands-on experience they need to pursue careers in fields as diverse as conservation and endangered species; land-use management; ecotoxicology; academic, industry or government research; or health care. Learning takes place through traditional classroom instruction, innovative laboratory projects with state-of-the-art technologies, field-based courses around the world, and a strong research program in which undergraduate students of all years are intensively mentored in a research lab.

The honours program in biology allows for in-depth study in one or more biological disciplines. Students can concentrate on a particular area by choosing one of three options: Cellular and Molecular Biology, Physiology, or Ecology, Evolution and Behaviour. This route includes a compulsory independent research project to equip students with advanced research, analysis and communication skills applicable to diverse careers. Alternatively, they can pursue diverse interests by selecting a general course of study that includes a number of advanced courses, and they can gain work experience while studying through the Co-Operative Education Programs.

This program is offered in English and in French.

Program Requirements

Co-operative education is available with this program.

The extended French stream is available with this program.

Requirements for this program have been modified. Please consult the 2018-2019 calendars (<http://catalogue.uottawa.ca/en/archives>) for the previous requirements.

3 optional course units in English (ENG) at the 1000 or 2000 level	3 Units
BIO 1130 Introduction to Organismal Biology	3 Units
BIO 1140 Introduction to Cell Biology	3 Units
CHM 1311 Principles of Chemistry	3 Units
CHM 1321 Organic Chemistry I	3 Units
GEO 1111 Introduction to Earth Systems	3 Units
MAT 1330 Calculus for the Life Sciences I	3 Units
MAT 1332 Calculus for the Life Sciences II	3 Units
PHY 1321 Principles of Physics I	3 Units
BCH 2333 Introduction to Biochemistry	3 Units
BIO 2129 Ecology	3 Units
BIO 2133 Genetics	3 Units
BIO 2135 Animal Form and Function	3 Units
BIO 2137 Introduction to Plant Science: Biodiversity to Biotechnology	3 Units
CHM 2120 Organic Chemistry II	3 Units
MAT 2379 Introduction to Biostatistics	3 Units
BIO 4920 Seminar I Evaluating Science	1.5 Units
BIO 4921 Seminar II Developing and Communicating Science	1.5 Units

9 optional course units in biology (BIO), biopharmaceutical science (BPS) or environmental science (EVS), ITI 1120, BCH 3120, BCH 3125, BCH 3356, BCH 4122, BCH 4125, BCH 4188	9 Units
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27 optional course units in biology (BIO), biopharmaceutical science (BPS) or environmental science (EVS) at the 3000 or 4000 level, BCH 3120, BCH 3125, BCH 3356, BCH 4122, BCH 4125, BCH 4188 ¹	27 Units
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9 elective course units offered by the Faculty of Arts, the Faculty of Education, the Faculty of Law, the Faculty of Social Sciences or the Telfer School of Management	9 Units
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24 elective course units	24 Units
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Total:	120 Units
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Note(s)

¹ Within your program of study, you must complete a minimum of 12 course units at the 3000 or 4000 level with a laboratory component. A complete list of courses having a laboratory component can be found below. Please note: if a course listed below has already been used to fulfill a compulsory or optional requirement in your program listed above, these course units count towards this total of 12 units.

List of Optional Courses

List of Optional Courses with a Laboratory Component

BIM 4316 Modern Bioanalytical Chemistry	3 Units
BIO 3103 Field Biology	3 Units
BIO 3126 General Microbiology Laboratory	3 Units
BIO 3137 Experiments in Animal Physiology	3 Units
BIO 3146 Ecophysiology of Plants	3 Units
BIO 3151 Molecular Biology Laboratory	3 Units
BIO 3152 Cell Biology Laboratory	3 Units
BIO 3154 Population and Community Ecology	3 Units
BIO 3158 Vertebrate Zoology	3 Units
BIO 3310 Plant Systematics and Diversity	3 Units
BIO 3333 Entomology	3 Units
BIO 3360 Computational Tools for Biological Sciences	3 Units
BIO 3924 Biology of Algae and Fungi	3 Units
BIO 4004 Honours Research	3 Units
BIO 4009 Honours Research	9 Units
BIO 4122 Experiments in Animal Behaviour	3 Units
BIO 4148 Phylogenetic Systematics	3 Units
BIO 4150 Spatial Ecology	3 Units
BIO 4156 Freshwater Ecology	3 Units
BIO 4158 Applied Biostatistics	3 Units
BIO 4910 Field Course in Ecology	3 Units
BPS 4104 Bioinformatics Laboratory	3 Units
BPS 4127 Advanced Techniques in Biosciences	3 Units