

Archived: September 9, 2021

Science and Technology Programs

Biology Honours

Location Offered:

Nanaimo

Credential:

Bachelor Degree

Program Length:

4 Years

The Program

The Bachelor of Science, Biology Honours emphasizes a "hands-on," integrative approach to learning. Smaller class sizes allow one-on-one interaction, fostering development of the student-mentor relationship. In addition, students in the Biology Honours program complete a comprehensive undergraduate research project, under the supervision of a Biology faculty member. Students expand their research skills through deep engagement in their chosen project.

The Biology Honours will be of interest to students looking towards careers in the biological and environmental sciences, in K-12 education, or in health sciences (e.g., Medicine, Dentistry, Pharmacy, Veterinary Medicine).

Program Outline

Requirements for an Honours

To obtain an honours biology degree, students must complete all the Institutional B.Sc. degree requirements, including Degree English Requirements, and the courses listed below.

| Year 1 | Credits |
|--|---------|
| BIOL 121 - (Introductory Zoology) | 4 |
| BIOL 123 - (Introduction to Cellular and Molecular Biology) | 4 |
| Select <i>one</i> of the following pairs: CHEM 140* - (Chemistry Fundamentals I) <i>and</i> , CHEM 141* - (Chemistry Fundamentals II) <i>or</i> CHEM 142* - (Chemistry Fundamentals II) | 8 |
| MATH 121 - (Calculus I) <i>and</i> , MATH 122 - (Calculus II) | 6 |
| PHYS 111 - (Physics for the Life Sciences I) <i>and</i> , PHYS 112 - (Physics for the Life Sciences II) | 8 |
| Degree English Requirements | 6 |

| Year 2 | Credits |
|---|----------------|
| BIOL 200 - (Principles of Cell Biology) | 3 |
| BIOL 201 - (Principles of Biochemistry I) | 3 |
| BIOL 202 - (Ecology) | 3 |
| BIOL 210 - (Microbiology I) | 3 |
| BIOL 212 - (Genetics) | 3 |
| BIOL 223 - (Botany) | 3 |
| CHEM 231 - (Organic Chemistry I) | 6 |
| CHEM 232 - (Organic Chemistry II) | 6 |
| MATH 203 - (Biometrics) | 3 |

| Years 3 and 4 | Credits |
|---|----------------|
| BIOL 305 - (Animal Physiology) | 3 |
| BIOL 402 - (Evolution) | 3 |
| BIOL 403 - (Current Topics in Biology) | 3 |
| BIOL 491 - (Undergraduate Research Project) | 6 |
| Select <i>eighteen</i> upper-level BIOL credits numbered 300 and above. | 18 |
| Specialization Options | |
| <i>Nine</i> credits from one of the following specialization options: | |
| Microbial Biology | |
| BIOL 332 - (Microbial Ecology) | 9 |
| BIOL 334 - (Virology) | |
| BIOL 336 - (Bacterial Genetics) | |
| BIOL 337 - (Biochemistry and Physiology of Microbes) | |
| BIOL 432 - (Applied Microbiology) | |
| BIOL 436 - (Pathogenic Microbiology) | |
| Molecular and Cellular Biology | |
| BIOL 341 - (Molecular Cell Biology) | 9 |
| BIOL 342 - (Advanced Biochemistry) | |
| BIOL 435 - (Immunology) | |
| BIOL 443 - (Developmental Biology) | |
| BIOL 445 - (Molecular Genetics) | |
| BIOL 465 - (Endocrinology) | |
| Aquatic and Terrestrial Ecology | |
| BIOL 310 - (Invertebrate Zoology) | 9 |
| BIOL 315 - (Parasitology) | |
| BIOL 320 - (Aquatic Ecosystems) | |
| BIOL 322 - (Terrestrial Ecosystems) | |
| BIOL 351 - (Population and Community Ecology) | |
| BIOL 360 - (Intro to Animal Behaviour) | |

The following elective requirements may be taken in Years 1-4:

- *Six* credits of Non-Science Electives
- *Fifteen* credits of General Electives

Completion Requirements

- Honours students need a minimum GPA of 3.67 ("A-") on all 3rd and 4th year courses taken within the discipline in order to graduate from an Honours program.
- Honours students must achieve a minimum grade of "A-" in BIOL 491 - (Undergraduate Research Project).
- Students who complete the Honours requirements but do not meet these grade requirements will graduate with the Major in Biology.

Admission Requirements

- Minimum GPA of 3.67 (A-) on the most recent 45 credits of study.
- All core 100-level courses and at least 21 credits of core 200-level courses including MATH 203 (Biometrics) must be completed before the start of BIOL 491.
- Students must identify a faculty advisor who is willing to supervise the research project.
- Students who meet the minimum requirements are not guaranteed admission in the program and space may be limited.

Career Opportunities

The Biology Honours will be of interest to students interested in pursuing graduate school in the biological sciences (Master's, Doctorate).

Start Date and Application Deadline

Students will be required to submit an application form (available from the Chair of the Biology Department) by February 15 of the third year of studies. Application forms will be submitted to the Chair of the Biology Department. Upon approval by the Biology Department, the B.Sc. Degree Advisor will be notified.

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