

# Biomedical Science (BSc, iBSc)

## Admission Requirements

### Prerequisite Requirements for BSc/iBSc:

- ENG4U, MHF4U, SBI4U, SCH4U
- Recommended: SPH4U
- Expected minimum admission average: low 80s – mid 80s

### Program Overview

Offered as an Honours-level stream in the Biology program, Biomedical Science students will enroll in biology, chemistry and other science courses while maintaining enough flexibility in their course timetable to explore individual interests in complementary disciplines. Working with an academic advisor, students will plan their courses to meet their own personal, academic and future career goals.

Starting in first year, students are introduced to both classroom and laboratory work and begin developing their understanding of the fundamental processes of life at the molecular, cellular and population levels. As students move through the program they choose from an extensive variety of science and non-science courses to tailor their degree to their individual interests. Additional options in the final years of the program allow for specialized study in areas such as:

- **Cancer**
- **Neurobiology**
- **Pharmaceutical chemistry**
- **Immunobiology**
- **Human molecular genetics**

These courses are taught by professors involved in cutting edge research, thereby providing a real world context for the material students cover in class.

### First Year Biomedical Science Major Courses:

- Biology
- Chemistry
- Calculus
- Computer Use
- General Education Course

### Second Year Biomedical Science Major Courses:

- Cell Biology and Biochemistry
- Genetics and Organic Chemistry
- Animal Biology or Statistics for Biologists
- Physics or Psychology
- General Education Course

### Upper Year Biomedical Science Major Course Options:

- Cell and Molecular Basis of Muscle Physiology
- Vertebrate Endocrinology
- Comparative Chordate Anatomy
- Human Molecular Genetics
- Human Anatomy and Physiology
- Regulation of Gene Expression
- Pharmaceutical Chemistry
- Animal Physiology
- Cellular Regulation
- Neurobiology
- Genomics
- Proteomics
- Biology of Cancer
- Virology
- Immunobiology

## Experiential Education

The Faculty of Science provides a rich diversity of opportunities for undergraduate students to engage in Experiential Education. The Internship Program provides students in this program with the opportunity to integrate their classroom learning with hands-on, paid, work experiences related to their field of study. Internship students will begin their work term(s) after their third year of classroom study and can take part in 4, 8, 12, or 16 months of work before returning to school to complete their studies.

Here are just a few of the companies you could have the opportunity to work for:

- Sanofi Pasteur
- Health Gene Corporation
- Parks Canada
- City of Toronto
- Grande Prairie Regional College

Visit [yorku.ca/science/students/experiential-education/](https://yorku.ca/science/students/experiential-education/) for more information.



## Career Pathways for Biomedical Science

Your studies in Biomedical Science at York will prepare you for a very diverse range of career options.

- Biology Research – academic, government, industry
- Cardiovascular Technician
- Epidemiologist
- Technical Writer
- Optician
- Industry – technical information, product information, sales
- Education – elementary, high school, college, university
- Professional Schools – Medicine, Dentistry, Pharmacy, Veterinary, Law, Business, etc.
- Health Sciences – nurse, chiroprapist, biomedical technician, genetic counsellor, diagnostic histologist, etc.
- Postgraduate Studies/Academic Career