

Physics & Astronomy (BSc)

Admission Requirements

Prerequisite Requirements for BSc:

- ENG4U, MHF4U, SPH4U, MCV4U
- Recommended: SCH4U
- Expected minimum admission average: high 70s – mid 80s

Program Overview

York's Physics and Astronomy program offers rigorous but flexible program options, offering four-year Honours B.Sc. or three-year Bachelor B.Sc. degree studies. Interested students may pursue Double Major programs combining Physics with other studies (for example, in Applied Mathematics, Chemistry, Computer Science, or Biology), or major/minor programs combining Physics with another program in Science or another Faculty at York.

The Undergraduate Program in Physics and Astronomy at York University is a program with multiple streams in which students will learn about physics or astronomy and their applications. Most important, students gain the learn how to think critically and to analyze and solve complex problems. Students have the option of pursuing studies in three different streams:

- **Physics**
- **Applied Physics**
- **Astronomy**
- **Astrophysics**

All Physics program options at York develop students' analytical skills, relying heavily on applied mathematics and constructing and testing theoretical models in directed experiments. The Physics program at York also emphasizes scientific report writing and presentation skills as an essential component of research and professional work in Physics.

First Year Physics & Astronomy Major Courses:

- Physics
- Chemistry
- Biology
- Calculus

Second Year Physics & Astronomy Major Courses:

- Classical Mechanics
- Electricity and Magnetism
- Relativity and Modern Physics
- Optics and Spectra
- Galaxies and the Universe
- Experimental Physics with Data Analysis
- Applied Multivariate and Vector Calculus

Upper Year Physics & Astronomy Course Options:

- Classical Mechanics
- Electricity and Magnetism
- Relativity and Modern Physics
- Optics and Spectra
- Computational Methods for Physicists and Engineers
- Experimental Physics with Data Analysis
- Applied Multivariate and Vector Calculus

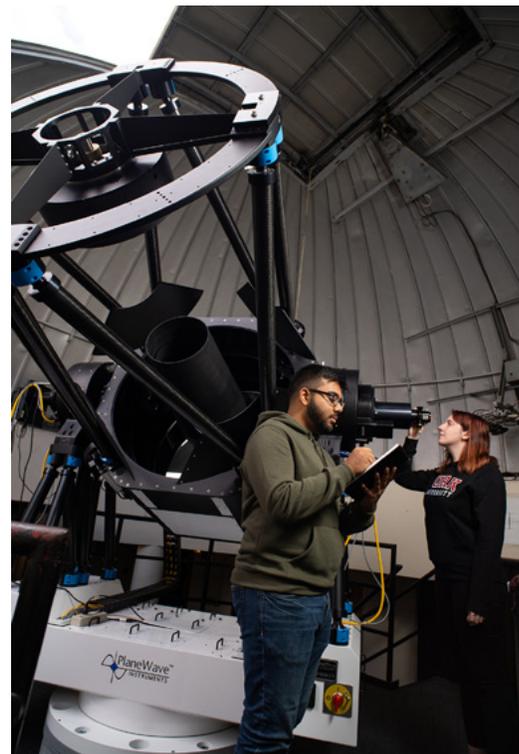
Experiential Education

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
- York Regional Police
- Health Gene Corporation
- Parks Canada
- City of Toronto
- Grande Prairie Regional College

Visit yorku.ca/science/students/experiential-education/ for more information.



Career Pathways for Physics & Astronomy

The four-year Physics programs (offering specializations in Physics, Applied Physics, or Astronomy) are designed to prepare graduates for careers in research and industry, while the three-year B.Sc. program offers a less intensive program of study while still providing a solid Physics education for graduates who hope to qualify for entrance into professional graduate programs, including medicine.

- Astrophysicist
- Medical Physicist
- Technician
- Acoustical Physics
- Meteorologist
- Aerospace Engineer
- Professor
- Applied Research
- Geophysicist
- Computer Programmer
- Cosmologist
- Environmental Physicist
- Postgraduate Studies/Academic Career