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 BSc. or three-year Bachelor BSc. degree studies. The program offers students the option of pursuing studies in three different streams:

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

Studying Physics or Astronomy at York will propel you into a challenging and exciting learning atmosphere. At York you will work with committed and innovative teachers to learn physics in a wide variety of ways. You will boost your critical thinking skills and learn to analyze and solve complex problems. You will conduct hands-on experiments in York’s well-equipped teaching laboratories. Physics majors will have a chance to trap and study atoms in a capstone course. Astronomy & Astrophysics majors often will use the Allan I. Carswell Observatory, featuring a new 1-meter telescope (the largest on any Canadian university campus).

All Physics and Astronomy program options at York develop students’ analytical skills, relying heavily on applied mathematics and constructing and testing theoretical models in directed experiments. The programs also emphasize scientific report writing and presentation skills as an essential component of research and professional work in Physics and Astronomy. In addition, you may have opportunities to acquire work experience conducting research in a for-credit individual research course with a York professor or through the Natural Sciences and Engineering Research Council of Canada’s (NSERC) summer program.

Interested students may pursue Double Major programs combining Physics with other programs in Science or in another Faculty at York (for example: Applied Mathematics, Mathematics for Education, or Computer Science), or major/minor programs combining a Physics major with a minor in many of the different programs offered at York.
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:

- Iristel
- York Regional Police
- Ontario Power Generation
- Optech
- Celestica
- TRIUMF

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

Possible Career Pathways for Physics & Astronomy

The four-year Physics programs (offering specializations in Physics, Applied Physics, or Astronomy & Astrophysics) are designed to prepare graduates for careers in research, high-tech industries, or graduate study in the physical sciences. The three-year BSc. programs offer a less intensive program of study while still providing a solid Physics education, for example for students interested in moving into industry. Both programs offer excellent foundations for graduates who aim to qualify for entrance into professional graduate programs, including medicine. Physics majors achieve some of the highest average scores on the MCAT exam for medical school.

Your training in Physics at York will open doors to a wide range of career options:

- Astrophysicist
- Medical Physicist
- Laboratory Technician
- Science Educator
- Meteorologist
- Research Scientist
- Professor

- Systems Analyst
- Data Scientist
- Geophysicist
- Computer Programmer
- Cosmologist
- Environmental Physicist
- Postgraduate Studies/Academic Career

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