

# Environmental Science (BSc)

## Physical Science Stream

### Admission Requirements

#### Prerequisite Requirements for BSc:

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

#### Program Overview

York's Environmental Science program offers a multidisciplinary four-year Specialized Honours degree organized around the major interacting systems of the atmosphere, water, living organisms, landforms, and the effects of human activities on these systems.

The Physical Sciences stream **integrates atmospheric sciences with surface water hydrology, hydro climatology, and landforms**. There is a focus on the linkages between atmospheric processes and surface physical geography. Like the Life Sciences stream, the Physical Sciences stream emphasizes field work, and offers multiple opportunities for field study and the development of technical expertise.

As part of your degree in Environmental Science at York, you may also complete a Certificate in Geographic Information Systems (GIS) and Remote Sensing. Geographic Information Systems (GIS) analyze and display environmental data in interactive maps, while remote sensing uses data gathered by instruments mounted on orbiting satellites or aircraft to measure and monitor environmental change. Both GIS and remote sensing are powerful tools for environmental analysis and management, and completion of the Certificate will significantly augment your Environmental Science studies at York and your ultimate career prospects.

#### First Year Physical Science Stream Major Courses:

- Chemistry
- Physics
- Physical Geography
- Calculus
- Linear Algebra
- Computer Programming
- General Education Course

#### Second Year Physical Science Stream Major Courses:

- The Hydrosphere
- Vegetation and Soils
- Introductory Meteorology
- Inorganic Chemistry
- Mechanics of Fluids and Solids
- Electricity and Magnetism
- Calculus • Geomorphology

#### Upper Year Physical Science Stream Course Options:

- Water Quality and Stream Ecosystems
- Applied Plant Ecology
- Ecological Climatology
- Remote Sensing of the Earth's Surface
- Climate and Climate Change
- Desert Ecosystems
- Physical Hydrology and Water Resource
- Dynamics of Snow and Ice
- Fluvial Geomorphology
- Pollutants, Invaders and Global Change
- Terrestrial Ecosystems
- Rivers: Environment and Process
- Hydrometeorology

## Experiential Education

The Faculty of Science provides a rich diversity of opportunities for undergraduate students to engage in Experiential Education. The Co-op 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. Co-op students will begin their first work term after their second year of classroom study and can take part in three, full-time, four-month work terms that alternate with periods of academic study.

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 Environmental Science

Your studies in Environmental Science at York will help prepare you for leadership roles in environmental fields of critical and increasing global demand. It will also prepare you for a very diverse range of career options.

- Environmental Consultant
- Environmental Pollution Assessment and Control
- Natural Resource Conservation
- Air Quality Specialist
- Education – elementary, high school, college, university
- Postgraduate Studies/Academic Career