(Pure) Mathematics (BA, BSc)

Admission Requirements

Prerequisite Requirements for BA:
- ENG4U, MHF4U,
- Recommended: MCV4U (highly recommended)
- Expected minimum admission average: high 70s – mid 80s

Prerequisite Requirements for BSc:
- ENG4U, MHF4U, SBI4U or SCH4U or SPH4U
- Recommended: MCV4U
- Expected minimum admission average: high 70s – mid 80s

Program Overview

Have you wondered how real numbers are defined? How spheres differ from donuts? Are you curious about the mathematics used in your cell phone? What about the mathematics behind cryptography, financial models, machine learning, or quantum algorithms? Or are you interested in mathematics simply for its elegance and beauty? Then Mathematics at York is the program for you.

The emphasis in this program is on understanding mathematical concepts, abstraction, and reasoning. You will also get an excellent foundation for a wide range of applications beyond mathematics and for many occupations demanding skills in mathematical reasoning and techniques.

In the first year course Problems, Conjectures, and Proofs, with class sizes of at most 35 students, you can interact with your peers and get personal attention from professors.

In the Bachelor of Arts (BA) program, you may also take courses in humanities, social sciences, economics, and languages. In the Bachelor of Science (BSc) program you may also take courses in other science fields in biology, chemistry, physics, computer science, and the earth and atmospheric science.
Experiential Education

You can participate in leading edge research in a research project supported by the Natural Science and Engineering Research Council of Canada. York is also a sponsoring member of the Fields Institute for Research in Mathematical Sciences.

In this program, you can work on problems in the classroom and in personalized reading courses. You can also participate in events outside the classroom like mathematics contests.

Students can participate in the Internship programs through the Science Academic Services office in the Faculty of Science.

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

Career Pathways for Mathematics

This program is a gateway to rewarding careers such as:

- Mathematician
- Teacher/Professor
- Data Scientist
- Tech Start-Up
- Machine Learning Analyst
- Risk Manager
- Derivatives Trader
- Operations Research
- Industry and Scientific Research
- Cryptologist/Cryptographer
- Computer Programmer/System Analyst
- Applied Science Technologist
- Quality Control Analyst
- Accountant/Financial Auditor/Financial Analyst
- Demographer