



Admission Requirements Mathematics (BA, BSc)

Prerequisite Requirements for BA:

- ENG4U, MHF4U
- Recommended: MCV4U

Prerequisite Requirements for BSc:

- ENG4U, MHF4U, SBI4U or SCH4U or SPH4U
- Recommended: MCV4U

Expected minimum admission average: high 70s – low 80s

If you major in Mathematics your courses in first year will probably be:

- Calculus
- Statistics
- Problems, Conjectures and Proofs
- Computing for Math and Statistics
- One of Biology, Chemistry, or Physics (BSc students only)
- General Education course(s)
- Elective

In second year you will probably take:

- Linear Algebra
- Calculus of Several Variables with Applications
- Elementary Probability
- Real Analysis
- One of Biology, Chemistry, or Physics (BSc students only)
- Mathematics electives
- General education course(s)

Career options for Mathematics majors include:

- Accountant, Financial Auditor, Actuary, Financial Analyst
- Applied Science Technologist, Quality Control Analyst
- Operations Research and Optimization, Industrial and Scientific Research
- Biometrician, Biostatistician
- Cryptologist, Cryptographer
- Computer Programmer/Systems Analyst
- Demographer
- Mathematician, Statistician
- Education – elementary, high school, college, university

Courses you might take in upper years include:

- Abstract Algebra
- Vector Integral Calculus
- Introduction to Geometries
- Mathematical Analysis
- Number Theory and Theory of Equations
- Discrete Mathematics
- History of Mathematics
- Mathematics of Cryptography

Why study Mathematics at York University?

If you have chosen Mathematics, your studies at York will emphasize mathematical concepts, abstraction, and reasoning, together with high-level problem-solving. Your studies will begin with core courses like calculus, problems, conjectures & proofs, linear algebra, probability and computing, and will prepare you for more advanced courses including abstract algebra, differential equations, geometry, mathematical analysis, number theory and theory of equations, and discrete mathematics. These studies are ideal for students who intend to pursue teaching or graduate studies in mathematics, and will also give you an excellent background for occupations demanding skills in mathematical reasoning and techniques.

BA or BSc Program Overviews

Students in Mathematics have the option of pursuing the major as either a Bachelor of Arts (BA) or Bachelor of Science (BSc), giving you the option to combine your studies in mathematics with human and social issues or with other science disciplines. The mathematics courses required for the major are the same in the BA and BSc programs. The difference between the BA and BSc lies in the requirements outside your major. BA students take courses from liberal arts areas, such as humanities, social sciences, economics, and languages. BSc students study Mathematics within the context of other sciences, such as physics, chemistry, biology, computer science, and earth and atmospheric science.

Facilities and Opportunities at York University and Beyond

Your studies in Mathematics at York will take place in energetic classes and tutorials taught by fifty full-time faculty members whose teaching and research interests span the spectrum of mathematical studies today. Our strong academic support system includes the Math Tutorial Labs and the peer Study Group program to bolster your mathematical understanding. Club Infinity offers social and intellectual exchange with your peers. A rich array of academic prizes and awards recognizes high achievement in your mathematical studies. Mathematics at York strongly supports its students who enter and achieve highly in international mathematics contests like the Putnam Competition and the Mathematical Contest in Modeling.

Experiential Education

The Faculty of Science provides a rich diversity of opportunities for undergraduate students to engage in Experiential Education. Students can explore the ideas covered in class through a variety of experiences – whether they are in the classroom, in a lab, working in a community organization or a private sector firm.

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 [/science.yorku.ca/current-students/ee/](http://science.yorku.ca/current-students/ee/) for more information

As a graduate of Mathematics at York, you will be prepared for leadership in a wide array of careers, and will gain the background to succeed in a full range of graduate professional and academic programs.