



Admission Requirements Mathematics for Education (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

<p>If you major in Mathematics for Education your courses in first year will probably be:</p> <ul style="list-style-type: none"> • Calculus • Statistics • Problems, Conjectures and Proofs • Computing for Math and Statistics • One of Biology, Chemistry, Physics or Earth & Atmospheric Science • An elective course in an area planned as second teaching subject 	<p>In second year you will probably take:</p> <ul style="list-style-type: none"> • Linear Algebra • Calculus of Several Variables with Applications • Differential Equations or Statistics or Mathematical Theory of Interest • Elementary Probability • Plus a course in an area planned as a second teaching subject
<p>Career options for Mathematics for Education majors include:</p> <ul style="list-style-type: none"> • Math teacher – elementary, high school, college, university • Math education research and policy • Post Graduate Studies • Areas combining mathematical skills and communication skills • Mathematician, Statistician 	<p>Courses you might take in upper years include:</p> <ul style="list-style-type: none"> • Topics in Mathematics Education • History of Mathematics • Introduction to Geometries • Operations Research • Computational Mathematics • Algebra • Number Theory and Theory of Equations • Mathematical Analysis • Differential Equations • Courses in an area planned as a second teaching subject • Mathematics electives

Why study Mathematics for Education at York University?

Despite the surplus of teachers in Ontario, there is a shortage of qualified teachers of mathematics in not only Ontario, but also across North America. A degree in Mathematics for Education from York will prepare you for a fulfilling future in mathematics education. We will help you achieve this goal by providing you with foundational knowledge in mathematical concepts; teach you how to think critically; allow you to develop your problem-solving skills; and enhance your understanding of the history of mathematics and the role of mathematics in the education system and society. You will come away from this degree well prepared for continuing studies in education, including a Bachelor of Education (BEd), as well as graduate work in Mathematics Education

BA or BSc

Students in Mathematics & Statistics 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 & Statistics within the context of other sciences, such as physics, chemistry, biology, computer science, and earth and atmospheric science.

Program Overview

You may take York's Mathematics for Education degree through the major program, specialized honours, honours major, honours major/minor, or honours minor program. This degree may be taken at the same time as York's concurrent education program or prior to taking a one-year consecutive education program at York or another university.

While the Mathematics for Education program includes all the courses required to have Mathematics as a first teachable subject, it does not replace the BEd program required for certification as a teacher in Ontario.

York acknowledges the fact that your interests may change as you progress through your degree. In order to leave windows of opportunity open, we have designed our Mathematics for Education program so that should you decide that you would prefer to concentrate on another area of mathematics such as Applied Mathematics, Pure Mathematics, Statistics, or Computational Mathematics, you may transfer into one of our other mathematics programs up until the end of your second year without having to take any additional courses.

Graduates of this program are eligible for graduate work in education, and in programs such as the MA in Mathematics for Teachers at York. With an appropriate selection of optional courses, a graduate of this program can also apply for other graduate programs in Mathematics.



science



Facilities and Opportunities at York University and Beyond

By studying mathematics at York, you will be learning from the best. Our award-winning professors have a passion for both mathematics and teaching. Our faculty also hire undergraduate students for summer research, often through the NSERC Undergraduate Student Research Awards (USRA), including research related to mathematics education. These experiences will enhance the styles of your future teaching of the subject.

By becoming a member of our undergraduate student mathematics society, Club Infinity, participating in our Mathematics and Statistics Tutorial Labs, SOS and our peer Study Group program, and attending the annual Canadian Undergraduate Mathematics Conference, CUMC, you will have unlimited opportunities to meet others who share your interests and discuss your ideas. An invaluable opportunity for discussions of issues in mathematics education at primary, secondary, and post-secondary levels is the monthly Fields Institute's Mathematics Forum in Toronto.