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Mathematics for Education

BA, BSc | www.yorku.ca/science/mathematics-for-education

Admission Requirements

BA

- ENG4U, MHF4U
- **Recommended:** MCV4U
- **Minimum admission average:** high 70s – mid 80s

BSc

- ENG4U, MHF4U, SBI4U or SCH4U or SPH4U
- **Recommended:** MCV4U
- **Minimum admission average:** high 70s – mid 80s

Program Overview

In the Mathematics for Education program, you will combine mathematics and education to develop a wide perspective on the teaching and learning of mathematics. You will become well prepared for a rewarding career in mathematics education and find yourself in demand in a market with an ongoing shortage of qualified mathematics teachers.

A degree in Mathematics for Education from York University will provide you with knowledge of mathematical concepts, teach you how to think critically, 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 get a strong foundation in applied mathematics, pure mathematics, and statistics, and be able to engage in more advanced study in areas that interest you.

If your goal is to work as a qualified teacher, you can earn a second teaching subject in another area. At York University, you will be part of a small, tightly knit program in which you will develop the skills and knowledge of an effective mathematics educator. Your program will include small, group-based courses in which you can work closely with professors and your fellow students. You can work with our vibrant Teaching Stream Faculty on research and development in mathematics education and gain valuable research and teaching experience.

First Year Courses:

- Calculus
- Statistics
- Linear Algebra
- Mathematical Computing
- Electives for a second teachable

The Math & Stats programs at York are designed so you can switch between any of our programs in the first three semesters and still finish your degree on time.

Students in the BSc degree will also take courses in other science fields such as Biology, Chemistry, or Physics.

Second Year Courses:

- Multivariable Calculus
- Differential Equations
- Probability
- Mathematical Theory of Interest
- Electives for a second teachable

Upper Year Options:

- Topics in Mathematics Education
- History of Mathematics
- Introduction to Geometries
- Mathematical Biology
- Differential Equations
- Number Theory
- Computational Mathematics
- Analysis and Algebra
- Electives for a second teachable

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www.yorku.ca/science/mathstats/mathematics-for-education

Experiential Education

Recent students have worked on pedagogical research projects on topics such as experiential learning, the improvement of the first-year experience, curriculum development and design, open educational resources, peer mentorship and supervision, technology in the classroom, graduate student teaching training, and incoming student background preparation, all in relation to mathematics and statistics. You will have paid, volunteer, and course-credit opportunities to get involved, give back, and develop your teaching and coaching skills, as a peer mentor, peer tutor, or study group facilitator.

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

Possible Career Pathways

This program is designed for those who wish to enter a career in mathematics education, but the program's flexibility will give you the knowledge and skills to work in any industry looking for strong computational, analytical and communication skills.

To become a qualified mathematics teachers in Ontario, you can complete your Mathematics for Education (BSc/BA) and your Bachelor of Education (BEd) degrees **concurrently or consecutively.** In the concurrent option, you complete the two degrees at the same time. In the consecutive option, you first do your BA/BSc and then do your BEd.

Get In Touch

Domestic Students:
science@yorku.ca

International Students:
intlsci@yorku.ca

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"York's Mathematics for Education program allowed me to explore topics in mathematics I was passionate about. With flexible program requirements, I was able to take courses in other fields of interest to satisfy second teachable requirements, while still focusing on mathematics. The program's capstone course allowed me to get an inside look at being a teacher, and helped me finalize my future goals"

- Caroline, Mathematics for Education Alumni