

# Mathematics & Statistics Mathematics & Engineering PhD Map

## Applying to and Navigating Graduate Studies

### Why GRADUATE STUDIES in MATHEMATICS and STATISTICS?

A doctoral degree in Mathematics and Statistics is essential for anyone aspiring to a research or academic position, and for those who want to assume a leadership role in government, business, and industry. The Doctor of Philosophy is a research degree, and doctoral studies are an essential step in the preparation of a research scientist.

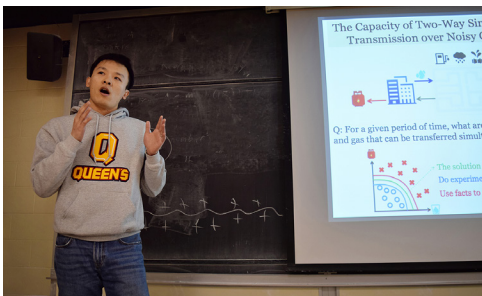


### Why QUEEN'S?

Queen's is an ideal place to pursue graduate study in Mathematics and Statistics. We have an outstanding group of faculty researchers who are internationally recognized in their fields of specialization. They represent a wide variety of areas including pure mathematics, mathematical physics, mathematics applied to engineering, mathematical biology, and both theoretical and applied statistics.

### Program STRUCTURE

Course work, qualifying exams, thesis prospectus exam, and thesis.



*"The graduate mathematics program at Queen's University is academically rigorous, deeply rewarding, the perfect preparation for a future career in industry or academia."*

*– Jeff Calder, Associate Professor of Mathematics, University of Minnesota*

### RESEARCH Areas

- Algebra and Number Theory
- Analysis, Geometry, and Topology
- Applied Mathematics
- Probability and Statistics

As part of your application for admission to the Department of Mathematics and Statistics you will be asked to describe your research interests. We encourage you to review faculty research interests and faculty profiles to learn more about the research interests represented in our Department. Applicants are encouraged to contact prospective supervisors with their questions.



GRAD MAP FOR PhD STUDENTS 



**GRADUATE STUDIES AND POSTDOCTORAL AFFAIRS**

[queensu.ca/grad-postdoc](https://queensu.ca/grad-postdoc)



# Mathematics & Statistics, Mathematics & Engineering PhD Map

DOCTOR OF PHILOSOPHY (PhD)



## Knowledge & Workplace Skills

A graduate degree in Mathematics and Statistics or Mathematics and Engineering can equip you with valuable and versatile skills, such as:

- Knowledge and technical skills**
- Effective communication skills** in multiple forms for diverse audiences
- Information management:** prioritize, organize, and synthesize large amounts of information
- Time management:** meet deadlines and manage responsibilities despite competing demands
- Project management:** develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions
- Creativity and innovation**
- Perseverance**
- Independence** and experience as a **collaborative** worker
- Awareness**, an understanding of sound **ethical** practices, **social responsibility**, responsible research, and **cultural sensitivity**
- Professionalism** in all aspects of work, research, and interactions
- Leadership:** initiative and vision leading people and discussion

## Career Possibilities

A PhD in Mathematics and Statistics or Mathematics and Engineering can take your career in many directions. In Canada, less than 40% of all PhDs will work in post-secondary education – the majority will work in industry, government, or non-profits.

- Academia
- Biostatistics
- Business Analysis
- Clinical Data Analysis
- Finance

Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.

### How to use this map

Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. To make your own custom map, use the My Grad Map tool: [careers.queensu.ca/gradmaps](https://careers.queensu.ca/gradmaps).



# Graduate Studies FAQs

## How do I make the most of my time at Queen's?

Use the Grad Map to plan for success in five overlapping areas of your career and academic life. Everyone's journey is different - the ideas on the maps are just suggestions to help you explore possibilities. For more support with your professional development, take advantage of the SGSPA professional development framework and the new Professional Development Plan (PDP) process to set customized goals to help you get career ready when you graduate.

## Where can I get help?

Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming environment offers the programs and services you need to be successful, both academically and personally. Check out the [SGSPA website](#) for available resources.

## What is the community like?

At Queen's, graduate students from all disciplines learn and discover in a close-knit intellectual community. You will find friends, peers and support among the graduate students enrolled in Queen's more than 130 graduate programs within 50+ departments & research centres. With the world's best scholars, prize-winning professional development opportunities, excellent funding packages and life in the affordable, historic waterfront city of Kingston, Queen's offers a wonderful environment for graduate studies. Queen's is an integral part of the Kingston community, with the campus nestled in the core of the city, only a 10-minute walk to downtown with its shopping, dining and waterfront. For more about Kingston's history and culture, see Queen's University's Discover Kingston page.

# Application FAQs

## What do I need to know to **APPLY**?

### ACADEMIC REQUIREMENTS

Master's degree in Mathematics and/or Statistics or related field (e.g. engineering) with a minimum B+ standing and demonstrated research potential and clear interests.

### ADDITIONAL REQUIREMENTS

- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The following minimum scores are required: (1) TOEFL iBT: Writing (24/30); Speaking (22/30); Reading (22/30); Listening (20/30). Applicants must have the minimum score in each test as well as the minimum overall score, or (2) IELTS: 7.0 (academic module overall band score and a 7.0 for each test band), or (3) PTE Academics: 65, or (4) CAEL CE -70 (minimum overall score).

### KEY DATES & DEADLINES

- **Application due:** Although applications can be submitted up to April 30th, applicants are advised to submit their applications as soon as possible and by January 15th in order to receive full funding consideration.
- **Notification of acceptance:** Rolling acceptances.

Before you start your application, please review the Graduate studies application process.

## What about **FUNDING**?

Funding can come from various sources including internal and external scholarships and awards, research fellowships and teaching assistantships. The current minimum funding guarantee from all sources is \$32,500 per year, throughout years 1-4.

We encourage all students to apply for external funding from OGS, NSERC, and other sources. For more information on sources of funding see Funding, Awards, Scholarships and Bursaries.

