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.

“The graduate mathematics community at Queen’s is vibrant, international, and intellectually stimulating.”

– John Treilhard,

Program STRUCTURE

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

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.
2022-2023
Mathematics & Engineering, Mathematics & Statistics PhD Map

DOCTOR OF PHILOSOPHY

YEAR I

- Key priorities include your relationship with your advisor and forming your supervisory committee, coursework, preparing for, and passing qualifying exams.
- Meet early with your supervisor to set expectations and discuss roles, responsibilities, program requirements, resources, research/occupational goals, timelines, and any required accommodation plans.
- Look to Student Academic Success Services for a variety of supports.
- Attend weekly seminars of interest, the Graduate Student seminar, and the departmental Colloquium.

YEAR II

- Write and defend your thesis prospectus.
- Embark on your substantive research.
- Find your way through the academic process with help from departmental and School of Graduate Studies and Postdoctoral Affairs professional development workshops, the department Grad Chair, and the SGSPA website.
- Continue to attend seminars, and seek experiential/professional development opportunities.

YEAR III

- Continue to meet regularly with your supervisor, review research progress, and write your dissertation. Check out the SGSPA writing camps, like Dissertation on the Lake.
- Use conference presentations to create, discuss, and explore ways to disseminate research findings. Learn from the School of Graduate Studies and Postdoctoral Affairs professional development publishing workshop.
- Begin discussion of potential thesis defense

YEAR IV

- Plan date of thesis submission for examination.
- Present your research to graduate students and faculty or at conferences and work with supervisor to prepare for defense.
- Review submission and examination guidelines.
- Secure necessary oral defence accommodations.

WHAT WILL I LEARN?

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

- Knowledge and technical skills
- Effective communication skills
- Professional and interpersonal skills

WHERE CAN I GO?

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
- Clinical Data Analysis
- Business Analytics
- Finance

Tackling time to explore career options, build experiences, 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 overarching areas of career and academics. The map just offers suggestions—you don’t have to do it all. To make your own custom map, use the My Major Map tool.
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?

The minimum funding guarantee for Mathematics and Statistics PhD students is $26,500 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.