Why GRADUATE STUDIES in MATHEMATICS and STATISTICS?

A graduate degree in Mathematics and Statistics is essential for anyone aspiring to research or academic positions, and is very useful for those who want to assume a leadership role in government, business and industry. A Master’s degree in mathematics and statistics prepares students for a wide variety of research and industry career options.

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 (number theory, algebra, algebraic geometry, combinatorics, operator algebras, random matrices and dynamical systems), mathematical physics, mathematics applied to engineering (control theory, communication theory), mathematical biology, and both theoretical and applied statistics.

Program STRUCTURE

- MSc Pattern I (18-24 months): course work and a research thesis.
- MSc Pattern II (12 months): course work and research project.
- MASc (18-24 months): course work and a research thesis.

RESEARCH Areas

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

MASc
- Mathematics and Engineering

We encourage you to identify an area of research interest and contact a potential supervisor before applying.

Visit the Department of Mathematics and Statistics website to read faculty profiles and learn more about faculty members’ research areas. When you find a faculty member with similar research interests to yours, contact him/her and tell them about your interest in graduate work and related experience.

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

–John Treilhard, MSc
### Mathematics and Statistics

**MSc, MASc MAP**

**GETTING STARTED**

- **Achieve your Academic Goals**
  - Start with key priorities like developing your relationship with your supervisor and doing your coursework.
  - Find your way through the academic process with help from departmental and **Expanding Horizons** professional development workshops, the department Grad Chair, and the **SGS Habitat**.

- **Maximize Research Impact**
  - Start to think about the audiences for your research.
  - If you will be continuing graduate studies explore graduate programs and apply for external scholarships such as NSERC, or OGS.

- **Build Skills and Experience**
  - Consider positions in student services, the **SGPS**, or media outlets like the *Queen's Journal*, *CFRC*, and the SGS Blog. Look in the AMS Clubs Directory for more ideas.
  - Serve on departmental, faculty, or university committees.
  - Check out professional development workshops from **Expanding Horizons**.

- **Engage with your Community**
  - Explore how you can connect with your community through experiential opportunities on- and off-campus.
  - Consider volunteering with different community organizations, such as **Math Quess**, a math camp for girls.

- **Launch your Career**
  - Finding a career that fits starts with knowing yourself. Get help by taking a **Career Services career planning workshop** or meeting with a career counsellor. Check out books like *So What Are You Going to Do With That?* or The Academic Job Search from the Career Resource Area for advice on various career options.
  - Start reading publications like *University Affairs* and the *Chronicle of Higher Education*. Browse non-academic labour market websites. Stay on the lookout for special events like Graduate Student **Horizons**.
  - Check admission test deadlines if needed for further studies.

**INTERMEDIATE STAGE**

- **Achieve your Academic Goals**
  - Complete your coursework; begin to research and write your project or thesis.
  - Attend the weekly Math & Stats Department Colloquium.

- **Maximize Research Impact**
  - Attend or present at a graduate conference.
  - Consider participating in the **3 Minute Thesis (3MT)** competition.
  - Expand your research audience through social media such as Twitter or a blog.
  - Set up a meeting with the School of Graduate Studies for a **Grad Chat** to discuss your research interests.

- **Build Skills and Experience**
  - Start keeping an eportfolio of your skills, experiences and competencies.
  - Use a Research Assistant or Teaching Assistant position to develop your research or teaching skills.
  - For help with teaching, get support from the Centre for Teaching, and Learning.
  - Expand your research audience through social media such as Twitter or a blog.

- **Engage with your Community**
  - Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
  - Prepare for work or studies in a multi-cultural environment by taking the **OUC and Four Directions Aboriginal Student Centre's Training Certificate**.
  - If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

- **Launch your Career**
  - Explore different careers of interest by reading **alumni profiles** on the SGS website, and using **Queen'sConnects** on LinkedIn to connect with Queen's alumni, or find alumni in various careers through **Ask an Alum**.
  - If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

**WRAPPING UP**

- **Complete and defend your project or thesis.**

- **Consider publication options for your research.**

- **Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews. Get help from a **Career Services workshop**.**

- **Consider joining professional associations like the Canadian Mathematical Society or the Canadian Applied and Industrial Mathematics Society.**

- **Do some targeted networking with people working in careers of interest through Queen'sConnects on LinkedIn, the Queen's Alumni Association, professional associations, and at conferences. Get help from a **Career Services workshop**.**

- **Participate in hiring committees and attend job talks. Start focusing on areas of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Get help from Career Services with **Job searching, resumes, or interviews**.**

**WHAT WILL I LEARN?**

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
- Persistence
- 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

**WHERE CAN I GO?**

A Master's degree in Mathematics and Statistics or Mathematics and Engineering can take your career in many directions. Many of our MSc students choose to continue their academic inquiry with a PhD. Our Master's students are equipped with a strong foundation for careers in:

- Academia
- Biostatistics
- Clinical Data Analysis
- Business 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.

Visit careers.queensu.ca/gradmaps for the online version with links!
Graduate Studies FAQs

How do I use this map?

Whether you are considering or have embarked on graduate studies at Queen's, use this map to plan for success in five overlapping areas of your career and academic life. The map helps you explore possibilities, set goals and track your individual accomplishments. Everyone's journey is different – the guide offers options for finding your way at Queen's and setting the foundation for your future. To make your own customized map, use the online My Grad Map tool.

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 SGS HABITAT 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
- **MSc:** 4 year Bachelor's degree (perferably honours) with a minimum B+ standing.
- **MASc:** 4 year Bachelor's degree (normally in engineering) with a minimum B+ standing.

ADDITIONAL REQUIREMENTS
- Two official transcripts for all post-secondary studies.
- At least 2 letters of reference.
- Curriculum vitae.
- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The School of Graduate Studies requires the following minimum scores: (1) TOEFL (paper-based): 550; (2) TOEFL iBT: Writing (24/30); Speaking (22/30); Reading (22/30); Listening (20/30), for a total of 88/120 (applicants must have the minimum score in each test as well as the minimum overall score), or (3) IELTS: 7.0 (academic module overall band score), or (4) PTE Academics: 65.

KEY DATES & DEADLINES
- **Application due:** January 15 to receive full funding consideration. There is no deadline to apply for admission.
- **Notification of acceptance:** Rolling acceptances.

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

What about FUNDING?

Most MSc and MASc students in Mathematics and Statistics receive minimum funding of $23,000 per year. The funding package can consist of teaching assistantships or fellowships, research fellowships, internal and external awards and/or scholarships.

We encourage all eligible student to apply for external funding from OGS, NSERC and other sources. Queen's will automatically issue a $5,000 top-up to incoming master's students who are awarded federal government tri-council awards. For more information, see the School of Graduate Studies’ information on awards and scholarships.

Queens University

DEPARTMENT OF
MATHEMATICS
AND STATISTICS

Jennifer Read, Graduate Assistant
(613) 533-2405
mathstat.gradapp@queensu.ca
queensu.ca/mathstat