

# Mathematics & Statistics MSc Map

# Mathematics & Engineering MASc Map

## Applying to and Navigating Graduate Studies

### Why GRADUATE STUDIES in MATHEMATICS and STATISTICS?

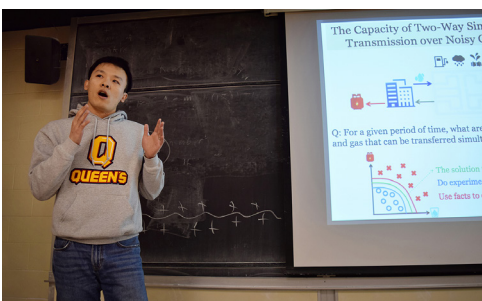
A graduate degree in Mathematics and Statistics is essential for anyone aspiring to research or academic positions, and for those who want to assume a leadership role in government, business, and industry. A Master's degree in mathematics and statistics or mathematics and engineering prepares students 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 or Engineering. 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

- 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.



GRAD MAP FOR MSc, MASc 

*"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 list 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.



GRADUATE STUDIES AND  
POSTDOCTORAL AFFAIRS

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

# Mathematics & Statistics, Mathematics & Engineering

MASTER OF APPLIED SCIENCE (MASc), MASTER OF SCIENCE (MSc)



## GETTING STARTED

## INTERMEDIATE STAGE

## WRAPPING UP

### 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 School of Graduate Studies and Postdoctoral Affairs (SGSPA) professional development workshops, the department Grad Chair, and the SGSPA website.

- Complete your coursework; begin to research and write your project or thesis.
- Attend the weekly Math & Stats Department Colloquium.
- Participate in the weekly departmental Graduate Student Seminar

- Complete and defend your project or thesis.

### 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.

- Attend or present at a graduate conference.
- Consider participating in the 3 Minute Thesis (3MT) or GRADflix competition.
- Expand your research audience through social media like LinkedIn, a blog or podcast.
- Consider being interviewed on the SGSPA radio show Grad Chat to talk about your research.

- Consider publication options for your research.
- Attend a meeting organized by a professional society such as the CMS, AMS, SSC, ISM, CAIMS, and SIAM.

### BUILD SKILLS AND EXPERIENCE

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

- 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. Enrol in SGS902 or the PUTL Certificate for more professional development in teaching and learning.

- 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.
- Check out opportunities for extra training through CTL, School of Graduate Studies and Postdoctoral Affairs professional development, MITACS, or other sources to boost your skills.

### 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 Quest, a math camp for girls.

- 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 Intercultural Awareness Training Certificate hosted by QUIC and Four Directions Indigenous Student Centre.
- If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

- Do some targeted networking with people working in careers of interest, through Queens Connects on LinkedIn, the Queen's Alumni Association, professional associations, and at conferences. Get help from a Career Services workshop.
- Consider joining professional associations like the Canadian Mathematical Society, Statistical Society of Canada, or the Canadian Applied and Industrial Mathematics Society.

### LAUNCH YOUR CAREER

- Finding a career that fits starts with knowing yourself. Get help by taking a Career Services workshop or meeting with a career educator and coach. Check out 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.
- Check admission test deadlines if needed for further studies.

- Explore different careers of interest by using Queens Connects on LinkedIn to connect with Queen's alumni. Check out Career Cruising for more information.
- If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

- 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, and interviews.

## 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 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
- 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

- **MSc:** 4 year Bachelor's degree or equivalent, in Mathematics and/or Statistics or related field, with a minimum B+ standing.
- **MASc:** 4 year Bachelor's degree in engineering and a strong background and interest in Mathematics and Statistics, with a minimum B+ standing.

### 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. Most master's students who require support receive a minimum funding guarantee of \$28,225 per year from all sources, for up to two years.

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

