Mathematics & Statistics MSc Map Mathematics & Engineering MASc Map

Applying to and Navigating Graduate Studies

Why GRADUATE STUDIES in MATHEMATICS and STATISTICS?

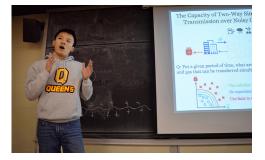
A graduate degree in Mathematics and Statistics is essential for anyone aspiring to research or academic positions, and for those who want to assume a leadership role in government, business, and industry. A Master's degree in mathematics and statistics prepares students for a wide variety of research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





"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 <u>faculty research interests</u> and <u>faculty profiles</u> to learn more about the research interests represented in our Department.





GRADUATE STUDIES AND POSTDOCTORAL AFFAIRS

2023-2024 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 <u>School of Graduate Studies and</u> Postdoctoral Affairs professional development workshops, the department Grad Chair, and the <u>SGSPA website</u>. 	 Complete your coursework; begin to research and write your project or thesis. Attend the weekly Math & Stats <u>Department Colloquium</u>. Participate in the weekly departmental Graduate Student Seminar 	Complete and defend your project
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 <u>3 Minute Thesis (3MT)</u> competition. Expand your research audience through social media such as Twitter or a blog. Set up a meeting with the School of Graduate Studies and Postdoctoral Affairs for a <u>Grad Chat</u> to discuss your research interests 	 Consider publication options for yo Attend a meeting organized by a pr the <u>CMS</u>, <u>AMS</u>, <u>SSC</u>, <u>ISM</u>, <u>CAIMS</u>, and Consider putting an article in <u>The C</u>
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 <u>AMS Clubs Directory</u> 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 <u>Centre for Teaching and Learning</u>. Enrol in SGS902 or the PUTL Certificate for more professional development in teaching and learning. 	 Practice articulating the skills you has settings outside the university, such networking, and interviews. Get hel workshop. Check out opportunities for extra the of Graduate Studies and Postdoctor development, <u>MITACS</u>, or other source.
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 <u>Math Quest</u>, 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 of interest, through <u>Queens Connec</u> <u>Queen's Alumni Association</u>, profess conferences. Get help from a Caree Consider joining professional assoce <u>Mathematical Society</u>, Statistical Soc <u>Canadian Applied and Industrial Material</u>
LAUNCH YOUR CAREER	 Finding a career that fits starts with knowing yourself. Get help by taking a <u>Career Services workshop</u> or meeting with a career educator and coach. Check out the <u>Career Resource Area</u> for advice on various career options. Start reading publications like <u>University Affairs</u> and the <u>Chronicle of Higher Education</u>. Browse non-academic labour market websites. Stay on the lookout for special events like School of Graduate Studies and Postdoctoral Affairs Career Week to explore your career pathways. Check admission test deadlines if needed for further studies. 	 Explore different careers of interest by using <u>Queens Connects</u> on LinkedIn to connect with Queen's alumni. Check out <u>Career</u> <u>Cruising</u> 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 focusing on areas of interest. Resea interest and start putting together potential positions of interest. Get h with job searching, resumes, and in

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. The map just offers suggestions – you don't have to do it all! To make your own custom map, use the <u>My Grad Map</u> tool.



ct or thesis.

your research.

professional society such as and <u>SIAM</u>.

e Conversation.

u have been developing in uch as casual conversation, help from a Career Services

a training through CTL, School toral Affairs professional sources to boost your skills.

th people working in careers <u>nects</u> on LinkedIn, the fessional associations, and at reer Services workshop.

sociations like the <u>Canadian</u> <u>Society of Canada</u>, or the <u>Mathematics Society.</u>

and attend job talks. Start search organizations of er your CV or resume for et help from Career Services I 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
- 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

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
- 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.

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 Individual. Development Plan (IDP) 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 <u>SGSPA website</u> for available resources.

What is the community like?

At Queen's, graduate students from all disciplines learn and discover in a closeknit 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.



Graduate 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 <u>graduate studies application</u> <u>process</u>.

What about FUNDING?

Most MSc and MASc students in Mathematics and Statistics receive minimum funding of \$25,500 per year for up to two years, depending on the program. Student funding packages normally consist of a combination of internal or external scholarships and awards, teaching assistantships, and research fellowships.

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



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