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

### YEAR IV
- Plan date of thesis submission for examination.
- Present your research to graduate students and faculty at conferences and work with supervisor to prepare for defence.
- 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 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 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 Analysis
- Finance

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

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### ACIEVING YOUR ACADEMIC GOALS
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### MAXIMIZE RESEARCH IMPACT
- Think about audiences for your research.
- Complete CORE online module on research ethics if doing research with living people or sensitive topics.
- Apply to NSERC, OGS, and other funding.
- Attend conferences in your field.

### BUILD SKILLS AND EXPERIENCE
- Serve on departmental, faculty or university committees.
- 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.
- Use a Teaching Assistant or Research Assistant position to develop your skills and experience.

### ENGAGE WITH YOUR COMMUNITY
- Explore how you can connect with your community through experiential opportunities such as volunteering.
- Consider volunteering with community organizations such as Math Quest, a math camp for girls.

### LAUNCH YOUR CAREER
- Finding a career fit starts with knowing yourself. Take a Career Services workshop or meet with a career counsellor for help. 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.

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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.

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

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.