Computing MSc Map

Applying to and Navigating Graduate Studies

GRAD MAP FOR MSc STUDENTS





The School of Computing is active in research on a broad range of topics, with an strong research record. Research areas include: Biomedical Computing, Cloud Computing, Databases, Data Mining, Mobile Networks, Software Engineering, Human-Machine Learning, Algorithms, Computational Linguistics, Theoretical Computer Science, Computational Geometry, Graph Theory, Artificial Intelligence, Parallel Systems, and Programming Languages. We are finding methods to make data more secure, software more reliable, and computers more intelligent.

"The cutting-edge research, world-renowned supervisors, unparalleled social experience, and a devotion to school life [...] result in nothing short of awesome."

- Eric Rapos, PhD student



The Queen's School of Computing offers a graduate program that is unique in its quality, diversity, innovation, and reach. Our faculty and students are engaged in research projects that span the spectrum of traditional computer science, while at the same time exploring areas never visited before. Some of us are discovering properties of certain computers that are radically different from the ones we have today, in the sense that a bit is the spin of an atom, or a register is a strand of DNA.





Others are building organic interfaces for humans to communicate with computers. At Queen's you will find a School reputed for its academic excellence and the wonderful atmosphere it enjoys.

Program STRUCTURE

- Research MSc (4-6 terms) course work and thesis, funded
- Project MSc (2-3 terms): course work and project, unfunded
- Course work MSc (2 terms)

RESEARCH Areas

- Artificial Intelligence
- **Biomedical Computing**
- **Data Analytics**
- **Databases and Cloud Computing**
- **Data Mining**
- Game Development
- **Human Computer Interaction**
- Mobile Computer Networking
- Software
- Theory

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



Visit the School of Computing 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 them and tell them about your interest in graduate work and related experience.



Computing MSc Map

MASTER OF SCIENCE (MSc)



GETTING STARTED INTERMEDIATE STAGE WRAPPING UP ACHIEVE YOUR ACADEMIC • Start with key priorities like developing your relationship with Complete your coursework; begin to research and write your Complete and defend your thesis or present your your supervisor, exploring possible research problems, and thesis or begin working on your project. **GOALS** doing your coursework. 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. **MAXIMIZE** • Attend or present at a graduate conference such as the Queen's • Consider publication options for your research. • Start to think about the audiences for your research. **RESEARCH** Computing Student Research Conference. **IMPACT** • If you will be continuing graduate studies, apply for NSERC and Attend a conference or workshop, such as the <u>International</u> • Consider participating in the <u>3 Minute Thesis (3MT)</u> competition. Conference on Software Engineering (ICSE), SPIE Medical OGS funding. Imaging conference, Conference on Human Factors in • Expand your research audience through social media such as Computing Systems (CHI), or the Canadian Conference on Twitter or a blog. Computational Geometry (CCCG). Set up a meeting with the SGSPA for a Grad Chat to discuss your Consider putting an article in The Conversation. research interests. BUILD **SKILLS AND** Consider positions in student services, the SGPS, or media • Start keeping an ePortfolio of your skills, experiences, and Practice articulating the skills you have been developing outlets like the Queen's Journal, CFRC, or the SGSPA Blog. Look in settings outside the university, such as casual competencies. **EXPERIENCE** in the AMS Clubs Directory for more ideas. conversation, networking, and interviews. Get help from • Use a Research Assistant or Teaching Assistant position to a Career Services workshop. Serve on departmental, faculty, or university committees. Talk develop your research or teaching skills. to the Queen's Graduate Computing Society for tips on getting Check out opportunities for extra training through CTL, • For help with teaching, get support from the <u>Centre for Teaching and Learning</u>. Enrol in SGS902 or the PUTL Certificate SGSPA professional development, MITACS, or other sources to boost your skills. for more professional development in teaching and learning. **ENGAGE** Women are encouraged to take part in the annual Canadian **WITH YOUR** Participate in your graduate and professional community Do some targeted networking with people working in careers of interest, through QueensConnects on Celebration of Women in Computing (CAN-CWiC). through activities such as graduate student outreach programs, COMMUNITY organizing conferences, and research groups. LinkedIn, the Queen's Alumni Association, professional Explore how you can connect with your community through associations, and at conferences. Get help from a Career Prepare for work or studies in a multi-cultural environment by experiential opportunities on- and off-campus. Services workshop. taking the Intercultural Awareness Training Certificate hosted Consider volunteering with different local community by QUIC and Four Directions Indigenous Student Centre. Consider joining professional associations like the organizations, such as Martha's Table, or Loving Spoonful. Association for Computing Machinery (ACM) and IEEE. • If you are an international student interested in staying in Enjoy a hot beverage on Tuesday and Thursday coffee breaks Canada, consider speaking with an International Student with faculty and peers. Advisor. LAUNCH YOUR Finding a career that fits starts with knowing yourself. Get help · Participate in hiring committees and attend job Explore different careers of interest by using Queens Connects CAREER talks. Start focusing on areas of interest. Research by taking a Career Services workshop or meeting with a career on LinkedIn to connect with Queen's alumni. Check out Career educator and coach. Cruising for more information. organizations of interest and start putting together your CV or resume for potential positions of interest. Get • Start reading publications like <u>University Affairs</u> and the • If you are considering a PhD, explore programs of interest help from Career Services with job searching, resumes, Chronicle of Higher Education. Browse non-academic labour reach out to faculty, and apply to PhD programs and external

scholarships.

WHAT WILL I LEARN?

A graduate degree in Computing can equip you with:

- 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 Computing can take your career in many directions. Some of our Research MSc may continue on to a PhD. In addition our MSc students are equipped with a strong foundation for careers including:

- Biomedical Engineer/Bioinformatics specialist
- Computer Systems/Database Manager
- Management positions in public, private and non-profit organizations
- Operations Research Specialist
- Systems Analyst/Operating Systems Programmer
- Systems Software Developer

and interviews.

Telecommunications/Networks Engineer

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

market websites. Stay on the lookout for special events like

School of Graduate Studies and Postdoctoral Affairs Career

· Check admission test deadlines if needed for further studies.

Week to explore your career pathways.

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 SGSPA website 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

- Undergraduate degree with a concentration in Computing Science.
- Candidates with high academic standing in an undergraduate degree other than computing science, who have some computing science background may be admitted as graduate preparatory students.
- Grade requirements: minimum upper second class standing (B+ average).

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: January 15th for both September and January admissions.
- **Notification of acceptance:** Between February and June.

Before you start your application, please review the <u>Graduate studies application</u> process.

What about FUNDING?

MSc students in the research stream receive minimum funding of \$21,000 per year. The other streams (course work and project) are funded by the student.

Apply for external funding from OGS, NSERC, and other sources. Queen's will automatically issue a one time \$5,000 award to incoming Masters students who have won federal government tri-council awards. For more information, see the School of Graduate Studies and Postdoctoral Affairs information on awards and scholarships.



