Why GRADUATE STUDIES in COMPUTING?

The School of Computing is active in research on a broad range of topics, with a strong research record. 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.”

Why QUEEN’S?

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

PhD (4 years): Course work, topic proposal, comprehensive exam, research, thesis writing, thesis defence.

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 him/her and tell them about your interest in graduate work and related experience.
How to use this map
Use the 3 steps 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 Major Map tool.

WHAT WILL I LEARN?
A graduate degree in Computing can equip you with:
- Knowledge and technical skills
- Effective communication skills in writing and oral presentations
- 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 Computing 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.
- Management positions in public, private and non-profit organizations
- Systems Software Developer
- Telecommunications/Networks Engineer
- Biomedical Engineer/Bioinformatics specialist
- Industrial Analyst
- Computer Systems/Database Manager
- Operations Research Specialist
- Electronic Data Processing Auditor
- X-ray diffractometer, a laser lab, and more.

YEAR I
- Key priorities include forming your committee, coursework, field exams, and language exam.
- Most early with your supervisor to set expectations and discuss roles, responsibilities, program requirements, resources, research/occupational goals, timeline, and any required accommodation plans.
- Look to Student Academic Success Services for a variety of supports.
- Prepare your topical proposal.

YEAR II
- Write and defend your thesis proposal.
- Embark on your substantive research.
- Set up regular meetings with your supervisor to discuss progress and obstacles to timely completion.
- Find your way through the academic process with the help of the School of Graduate Studies and Postdoctoral Affairs professional development and the SGSPA website.

YEAR III
- Continue to meet regularly with your supervisor, review research progress, and write your dissertation. Check out the SGSPA writing camp, such as Dissertation on the Lake.
- Use conference presentations to create, discuss, and explore ways to disseminate research. Find the School of Graduate Studies and Postdoctoral Affairs professional development publishing workshop.
- Begin discussion of potential thesis defence examine.

YEAR IV
- Plan date of thesis submission for examination.
- Present your research to graduate students and faculty or at conferences and work with supervisor to prepare for defence.
- Review submission and examination guidelines.
- Secure necessary oral defence accommodations.
- Discuss career pathways, references letters, and publication options with your supervisor.

ENGAGE WITH YOUR COMMUNITY
- Women are encouraged to take part in the annual Canadian Celebration of Women in Computing.
- Consider volunteering with different local community organizations, such as Martha’s Table or Loving Spoonful.
- Enjoy a hot beverage on Tuesday and Thursday coffee breaks with faculty and peers.

BUILD SKILLS AND EXPERIENCE
- Serve on departmental, faculty or university committees. Talk to the Queen’s Graduate Computing Society about getting involved.
- Consider positions in student services, the SGPS, or media outlets like the Queen’s Journal, CFRC, and the SGSPA. Log in to the AMS Clubs Directory.
- Use a Teaching Assistant or Research Assistant position to develop your skills and experience.

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. Hundreds of conferences exist in Computing.
- Attend or present at a graduate conference such as the Queen’s Computing Student Research Conference.
- Expand your research audience through social media such as Twitter or a blog.
- Attend the School of Graduate Studies and Postdoctoral Affairs professional development, and the SGSPA website.
- Continue to present at conferences.
- Consider participating in the 3 Minute Thesis (3MT) competition.
- Contact the Queen’s Media Centre for guidance on speaking to News outlets about your work.
- List yourself on the Arts and Science University Research website.

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? 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 School of Graduate Studies Career Week to explore your career pathways.
- Start building your teaching portfolio including student evaluations, and seeking mentorship.
- Explore different careers of interest by using Queen’s Connect on LinkedIn to connect with Queen’s Alumni. For more information check out Career Cruising.
- Investigate requirements for professional positions or other opportunities related to careers of interest.
- Participate in hiring committees and attend job talks. Research academic careers of interest. Craft your CV and job application materials.
- Start focusing on non-academic areas of interest. Research organizations of interest and start putting together your resume for potential positions of interest.
- Build connections with faculty outside of your department. Pursue internships for faculty positions and apply for post-doc fellowships and positions.
- Apply to jobs or make plans for other adventures. Get help from Career Services with job searching, resumes, and interviews.
- If considering jobs abroad, research possible immigration regulations. If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.
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 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 in Computing Science or a closely-related field.
• Grade requirements: minimum first class standing (A average).

ADDITIONAL REQUIREMENTS

• Statement of research interests.
• 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 Graduate studies application process.

What about FUNDING?

The minimum funding guarantee for Computing PhD students is $22,000 per year, throughout years 1-4. The funding package may be comprised of graduate awards and teaching assistantships.

We encourage all students to apply for external funding from OGS, NSERC and other sources. Queen's will automatically issue a one time $10,000 award to Doctoral 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.