

Biomedical & Molecular Sciences

PhD Map

Applying to and Navigating Graduate Studies

Why Graduate Studies in Biomedical & Molecular Sciences

Graduate students and their work are an important part of an ongoing research process that provides the scientific community with ways of understanding fundamental biomedical and molecular processes underlying normal cellular and microbial processes, organ system function, and human disease. The faculty, staff, and trainees in Biomedical and Molecular Sciences are engaged in world-class research and teaching, attracting, and mentoring the best students, the finest educators, dedicated support staff, and internationally-competitive researchers. We value curiosity, creativity, commitment, and collegiality.

Why Queen's?

The Biomedical and Molecular Sciences Department at Queen's provides a cross-disciplinary environment and delivers the programs in a collaborative and integrated manner.

This interdisciplinary approach gives candidates access to over 80 faculty members engaged in a broad spectrum of biomedical research, using techniques to address questions concerning single molecules, cellular/microbial function, organ-systems, and whole-animal biology.

Program Structure

PhD (4 years, full time): Research and comprehensive exam, thesis, and oral defense.



"DBMS provides graduate trainees the opportunity to conduct novel research in a collaborative, inclusive, and close-knit environment. Faculty promote cross-disciplinary learning by ensuring students are exposed to various scientific themes and cutting edge research techniques." – Ryland Mulder, PhD Candidate

Fields of Specialization

- **Biochemistry and Cell Biology:** focuses on understanding the fundamental processes of life and human disease.
- **Experimental Medicine:** employs interdisciplinary methods to explore the processes responsible for both the normal and diseased state.
- **Microbes, Immunity, and Inflammation:** focuses on questions at the cellular and molecular level involving viral and bacterial organisms and the immune system.
- **Reproduction and Developmental Sciences:** spans clinical and basic science, with a focus on fertilization and embryo implantation, perinatal health, women's health, and more.
- **Therapeutics, Drug Development,**

and Human Toxicology: focuses on the effects, both beneficial and deleterious, of chemicals including drugs and environmental contaminants, on human health.

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

Visit the [Biomedical and Molecular Sciences website](#) to read faculty profiles, and learn more about faculty members' research areas and research groups. 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.

See the [Biomedical and Molecular Sciences Graduate Student Handbook](#) online for more detailed information about the program.



Biomedical & Molecular Sciences PhD Map

DOCTOR OF PHILOSOPHY (PhD)



Knowledge and Workplace Skills

A graduate degree in Biomedical and Molecular Sciences 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

Career Possibilities

A PhD in Biomedical & Molecular Sciences can take your career in many directions. Many of our PhD students choose to continue their academic inquiry with teaching positions and further academic research. Our PhD students are equipped with a strong foundation for careers in:

- Academic, Health Care, Government, Private Sector Administration
- Educational specialization in Patent Law, Public Health, Business
- Entrepreneurial Ventures
- Health Care
- Marketing positions in Private Sector
- Pharmaceutical Industry
- Research in Academic and Private Sectors
- Teaching in Academic Institutions or Private Sector

Exploring career options and building experience can help you 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.

Graduate Studies FAQs

How do I use this map?

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?

Queen's offers graduate students from every discipline a close-knit intellectual community where they can learn, discover, and build lasting connections. With more than 130 graduate programs across 50+ departments and research centres, students benefit from world-class scholars, prize-winning professional development, generous funding packages, and life in the historic waterfront city of Kingston. The campus sits at the heart of Kingston, just a 10-minute walk from downtown's shops, restaurants, and waterfront, and is deeply integrated with the local community. For more on 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

- A Master's degree is normally required for admission to the PhD program. In certain circumstances, direct admission to the PhD program is possible.

ADDITIONAL REQUIREMENTS

- If English is not a first language, nor was the language of instruction in undergraduate studies, prospective students must meet English language proficiency requirements in writing, speaking, reading, and listening as part of the application process, and before final acceptance is granted, as per School of Graduate Studies and Postdoctoral Affairs' regulations.

KEY DATES & DEADLINES

- **Application due:** March 1st (To be considered for internal awards). Flexible deadline.
- **Notification of acceptance:** Pending confirmation of a supervisor.

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

What about Funding?

Doctoral students are currently guaranteed a minimum stipend of \$28,500 per year for years 1-4. This includes \$4,500 in TAsip earnings per year.

We encourage all students to apply for external funding from OGS, SSHRC, and other sources. For more information on awards and scholarships, consult the School of Graduate Studies and Postdoctoral Affairs' website.

