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

MSc (2 years, full time): Course work, seminars, research project and thesis with oral defense.

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.
GETTING STARTED

- Start with key priorities like developing your relationship with your supervisor, forming your committee, and doing your coursework.
- Find your way through the academic process with help from the departmental and Society of Graduate Studies and Postdoctoral Affairs professional development workshops, the department Grad Chair and the SGSPA website.

INTERMEDIATE STAGE

- Complete your coursework, begin to research and write your thesis.
- If working with animals, students must take an introduction course to animal care (QACS 799).
- Take the Lab Safety Training course and AODA training.
- Complete the Fundamentals of Academic Research course.
- Attend or present at a graduate conference. Ask your supervisor for recommendations.
- Consider participating in the 3 Minute Thesis (3MT) competition.
- Expand your research audience through social media such as Twitter or a blog.

WRAPPING UP

- Present your research to Biomedical and Molecular Sciences graduate students and faculty.
- Complete and defend your Master’s research thesis.
- Consider publishing elements of your research. Learn from the Society of Graduate Studies and Postdoctoral Affairs professional development workshops.
- Attend a major conference in your field. There are many to choose from, so talk to your supervisor for advice on which ones would be most relevant.
- Consider putting an article in The Conversation.
- Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews. Get help from a Career Services workshop.
- Check out opportunities for extra training through CTL, Society of Graduate Studies and Postdoctoral Affairs professional development, or other sources to boost your skills.

WHAT WILL I LEARN?
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 and 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 Biomedical & Molecular Sciences 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:

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

### What do I need to know to APPLY?

#### ACADEMIC REQUIREMENTS
- Recognized honours degree with a background in Biology or Health Sciences or equivalent professional degrees (e.g., BNc., BSc, PT).
- Grade requirements: B+ (77-79.9%) in the second, third and fourth years of an Honours Bachelor's degree.

#### 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: 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?

Master's students in Biomedical and Molecular Sciences are offered a minimum funding of $19,000 per year. As part of the minimum funding package, you may serve as a Teaching Assistant for at least one term per year.

Apply for external funding from OGS, CIHR/NSERC and other sources. Queen's will automatically issue a one time $5,000 top-up to Master's winners of federal government tri-council awards. See the School of Graduate Studies and Postdoctoral Affairs information on awards and scholarships for more.

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