

Biomedical & Molecular Sciences MSc Map

Applying to and Navigating Graduate Studies



GRAD MAP FOR MSc STUDENTS →

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.

"The Department provides an environment that encourages collaboration with numerous researchers with a wide variety of interests and expertise."

– Nikki Philbrook, PhD



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.

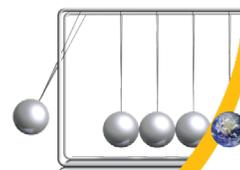
We encourage you to identify an area of research interest and contact a potential supervisor before applying.

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.



School of Graduate Studies
Create an impact
www.queensu.ca/sgs



GETTING STARTED

INTERMEDIATE STAGE

WRAPPING UP

ACHIEVE YOUR ACADEMIC GOALS

- 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 departmental and [Expanding Horizons](#) professional development workshops, the department Grad Chair and the [SGS website](#).
- Complete WHMIS hazard training.

MAXIMIZE RESEARCH IMPACT

- Start to think about the audiences for your research.
- If you will be continuing graduate studies, apply for funding from sources such as CIHR, NSERC, OGS, the Heart & Stroke Foundation, CBCF, the Department of Defence and the American Cancer Society.

BUILD SKILLS AND EXPERIENCE

- Consider positions in student services, the [SGPS](#), or media outlets like the Queen's Journal, CFRC, Studio Q and the SGS Blog. Look in the [AMS Clubs Directory](#) for more ideas.
- Serve on departmental, faculty or university committees. Talk to the graduate representatives for tips on getting involved.
- Check out professional development workshops from [Expanding Horizons](#) and the Rehabilitation Science Department.

ENGAGE WITH YOUR COMMUNITY

- Explore how you can connect with your community through experiential opportunities on- and off-campus.
- Consider volunteering with different community organizations, such as the [Kingston General Hospital](#).

LAUNCH YOUR CAREER

- Finding a career that fits starts with knowing yourself. Get help by taking a Career Services [career planning workshop](#) or meeting with a career counsellor. Check out books like *So What Are You Going to do With That?* or *Planning a Scientific Career in Industry* 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. Stay on the lookout for special events like Graduate Student Career Week to explore your career pathways.
- Check admission test deadlines if needed for further studies.

- 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 (BMED 860)
- Attend the departmental seminar program (BMED 897)

- 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.
- Set up a meeting with the School of Graduate Studies for a [Grad Chat](#) to discuss your research interests.

- Start keeping an ePortfolio of your skills, experiences and competencies.
- Use a Research Assistant or Teaching Assistant position to develop your research or teaching skills.
- For help with teaching, get support from the [Centre for Teaching and Learning](#). Enroll in [SGS902](#) or the [PUTL certificate](#) for more professional development in teaching and learning.

- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
- Prepare for work or studies in a multi-cultural environment by taking the [Intercultural Awareness Training Certificate](#) hosted by QUIC and FDISC.
- If you are an international student interested in staying in Canada, consider speaking with an [International Student Advisor](#).

- Explore different careers of interest by using [QueensConnects](#) on LinkedIn to connect with Queen's alumni.
- If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

- 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 [Expanding Horizons 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, [Expanding Horizons](#), [Mitacs](#), or other sources to boost your skills.
- Investigate internships from [Mitacs](#) and other sources.

- Do some targeted networking with people working in careers of interest, through [QueensConnects](#) on LinkedIn, the [Queen's Alumni Association](#), professional associations, and at conferences. Get help from a [Career Services workshop](#).
- Consider joining one of the many professional associations related to biomedical & molecular sciences, such as the [Canadian Society for Molecular Biosciences \(CSMB\)](#).
- Attend a conference in your field, such as the [International Conference on Bioinformatics and Biomedical Science \(ICBBS\)](#).

- Participate in hiring committees and attend job talks. Start focusing on areas of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Get help from Career Services with [job searching, resumes, or interviews](#).

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, 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.

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 SGS 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 [SGS website](#) for available resources.

What is the Queen's graduate 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](#)

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 (eg. 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' information on [awards and scholarships](#) for more.



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