

# Biomedical & Molecular Sciences MSc Map

## Applying to and Navigating Graduate Studies

GRAD MAP FOR MSc STUDENTS 

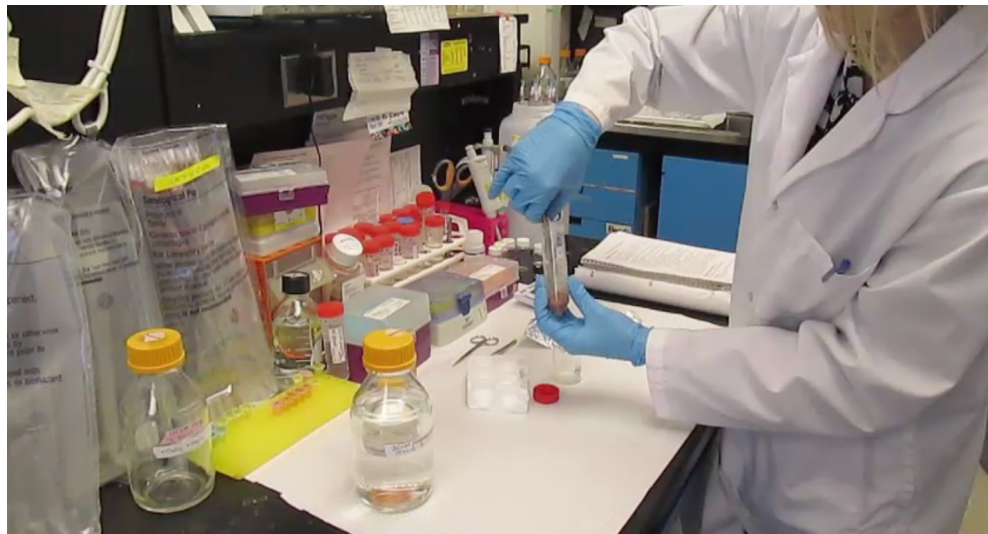
### Why GRADUATE STUDIES in BIOMEDICAL & MOLECULAR SCIENCES?

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

*"The Department provides an environment that encourages collaboration with numerous researchers with a wide variety of interests and expertise."*  
– Nikki Philbrook, PhD



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.

# Biomedical & Molecular Sciences MSc Map

MASTER OF SCIENCE (MSc)



## 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 School of Graduate Studies and Postdoctoral Affairs (SGSPA) professional development workshops, the department Grad Chair, and the SGSPA website.

- 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).

- Present your research to Biomedical and Molecular Sciences graduate students and faculty.
- Complete and defend your Master's research thesis.

### 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.

- Attend or present at a graduate conference. Ask your supervisor for recommendations.
- Consider participating in the 3 Minute Thesis (3MT) or GRADflix competition.
- Expand your research audience through social media such as Twitter or a blog.
- Consider being interviewed on the SGSPA radio show Grad Chat to talk about your research.

- Consider publishing elements of your research. Learn from the SGSPA 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.

### BUILD SKILLS AND EXPERIENCE

- Consider positions in student services, the SGPS, or media outlets like the Queen's Journal, CFRC, Studio Q, and the SGSPA Blog - Gradifying. 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 SGSPA professional development and the Rehabilitation Science Department.

- 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. Enrol in SGS902 or the PUTL certificate for more professional development in teaching and learning.

- 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, School of Graduate Studies and Postdoctoral Affairs professional development, Mitacs, or other sources to boost your skills.

### 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.

- 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 Four Directions.
- If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

- Do some targeted networking with people working in careers of interest, through 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).

### 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 educator and coach. Check out 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.
- Check admission test deadlines if needed for further studies.

- Explore different careers of interest by using 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.

- 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.
- Find impactful work that aligns with your values using the Queen's Career Guide to the UN Sustainable Development Goals.

## Knowledge & 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** 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

## Career Possibilities

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:

- 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

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. To make your own custom map, use the My Grad Map tool: [careers.queensu.ca/gradmaps](https://careers.queensu.ca/gradmaps).



# 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 Professional Development Plan (PDP) 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 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 Kingston page.

# 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?

The total minimum guaranteed stipend is currently \$25,500 per academic year for MSc students in Biomedical and Molecular Sciences. This includes \$4,500 in Taship earnings per year.

There will also be opportunities for additional Taship earnings throughout the academic year for MSc students that are on top of the minimum guaranteed stipends.

Apply for external funding from OGS, CIHR/NSERC, and other sources. See the School of Graduate Studies and Postdoctoral Affairs' information on awards and scholarships for more.



**Queen's**  
UNIVERSITY

DEPARTMENT OF  
BIOMEDICAL &  
MOLECULAR SCIENCES

Wendy Cumpson, Graduate Assistant

Email: [cumpsonw@queensu.ca](mailto:cumpsonw@queensu.ca)

Website: [dbms.queensu.ca/graduate](http://dbms.queensu.ca/graduate)