

# Biology MSc Map

## Applying to and Navigating Graduate Studies

GRAD MAP FOR MSc STUDENTS →

### Why GRADUATE STUDIES in BIOLOGY?

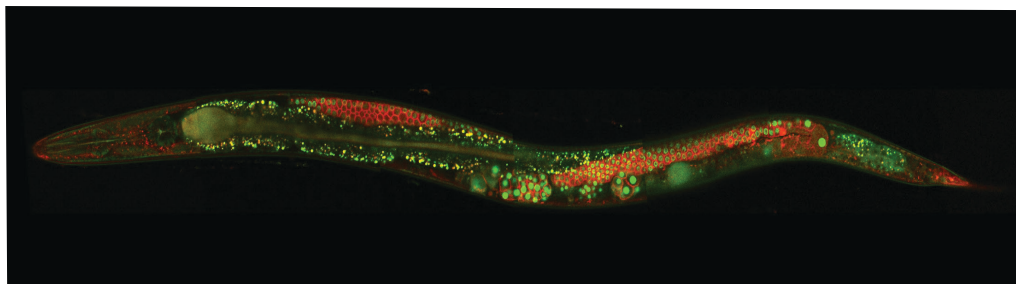
There is no end to the fascinating questions we can ask about how the natural world functions, from dissecting the molecular mechanisms at play in cells to understanding the complexity of interactions in the biosphere, the beauty and mystery of nature astounds. It is an incredibly exciting time to do biological research and we are learning about the natural world at a rate unprecedented in history. The remarkable power of modern research tools, from powerful gene-editing techniques to bioinformatics to ecosystem modelling, is driving exciting discoveries daily. These discoveries are made by graduate students. Regardless of your area of interest, there is something in biology for you, questions waiting to be answered, and riddles of nature to be solved.

*"When I started my [Biology graduate degree] at Queen's, all of a sudden I had this new network of friends who were interested in the same biological questions that I was- it was a ton of fun."*

– Roslyn Dakin, PhD

### Why QUEEN'S?

The Biology Department at Queen's is one of the largest departments on campus with approximately 100 graduate students supervised by over 30 faculty with research opportunities in a range of disciplines. Our faculty are world leaders in several research fields, including many Canada Research



Chairs and Queen's National Scholars, and winners of national and international awards for research and teaching excellence.

We offer a broad and challenging program in one of the top Biology departments in the country. We have an impressive range of sophisticated infrastructure for cell biology, biochemistry, molecular biology, ecology, and evolutionary research including: a confocal microscopy suite, DNA and RNA sequencing services, aquatic research facilities, and a state-of-the art phytotron. Our field station, comprising more than 3,200 hectares of woodland, fields, and lakes, is a short drive away and has excellent research facilities and living quarters.

### Program STRUCTURE

MSc (2 years): 4 single-term courses with minimum standing of 70% in each, research thesis and defence.

Students who show exceptional promise in their research have the option to transfer to the PhD program after one year.

### RESEARCH Areas

- Animal Physiology
- Cell and Molecular Biology
- Ecology, Evolution and Behaviour
- Plant Sciences
- Mathematical Modelling & Bioinformatics
- Paleolimnology

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

Visit the [Biology Department website](#) to read faculty profiles and learn more about faculty members' research areas.

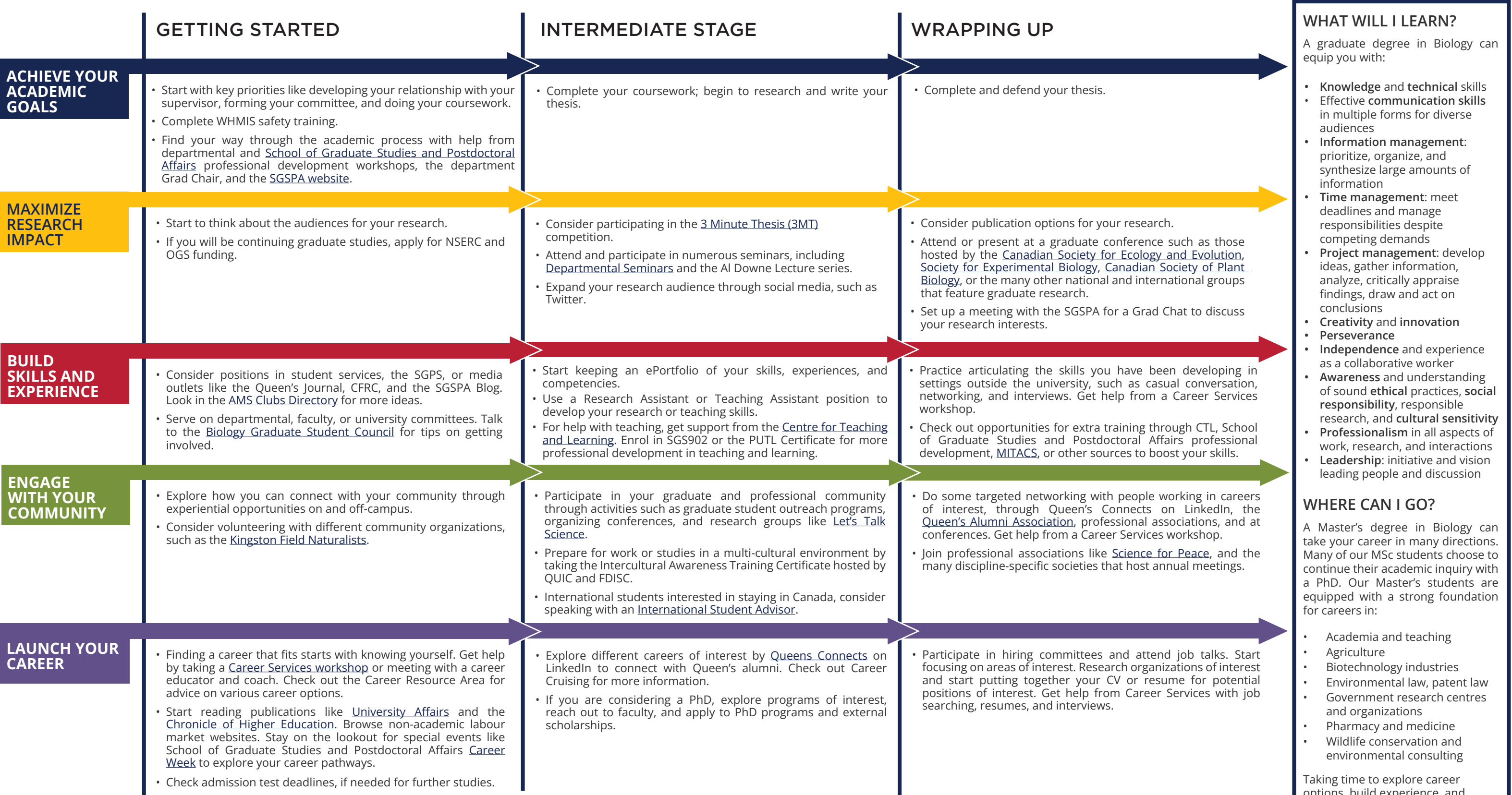
When you find a faculty member with similar research interests to yours, contact them and tell them about your interest in graduate work and related experience.



**GRADUATE STUDIES AND  
POSTDOCTORAL AFFAIRS**

# Biology MSc Map

MASTER OF SCIENCE (MSc)



### WHAT WILL I LEARN?

A graduate degree in Biology 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 Biology 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:

- Academia and teaching
- Agriculture
- Biotechnology industries
- Environmental law, patent law
- Government research centres and organizations
- Pharmacy and medicine
- Wildlife conservation and environmental consulting

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 Grad Map](#) tool.



# 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

- Honours Bachelor's Arts & Sciences degree.
- **Grade requirements:** minimum upper second class standing (B+ average).

### ADDITIONAL REQUIREMENTS

- Correspond with potential supervisors (may require CV).
- 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 1 (domestic students), February 15 (international students).
- **Notification of acceptance:** Students are accepted on a rolling basis as applications are reviewed.

Before you start your application, please review the [Graduate studies application process](#).

## What about FUNDING?

MSc students in Biology receive minimum funding of \$24,300 per year for the two years of the program. Current tuition and other fees can be found [here](#).

Apply for external funding from OGS, NSERC, and other sources. Queen's will automatically issue a one time \$5,000 award to incoming Masters 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](#), or see what awards are offered through the Biology Department.



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