

MCB Thesis Track Information - Overview

The Molecular and Cell Biology Master's program at Quinnipiac University allows students to complete a Master's Thesis Project as part of their degree. Thesis students are required to meet a GPA requirement, and complete a 3-course sequence under the direction of their thesis mentor:

BIO 649: Independent Study (relating to thesis work) - 2 credits

BIO 650: Thesis I - 4 credits

BIO 651: Thesis II - 4 credits

Students must perform satisfactorily at each stage. If they are unable to complete their thesis work, they move to the non-thesis track and the courses completed count toward their graduation requirements as electives.

Thesis Committee:

A committee consisting of the research mentor, one tenured member of the Biological Sciences department and another Quinnipiac faculty member (typically in Biological Sciences). You may consult with your advisor and the director on the composition of your committee.

Thesis Advisor Responsibilities

The Thesis Advisor is the direct project mentor for all thesis coursework (BIO 649, BIO 650 and BIO 651). The thesis advisor will provide the student with close support for their scientific research and the generation of a formal thesis proposal.

The Thesis Advisor's duties include the following:

- Confirm that the student is familiar with and has received training concerning the handling of dangerous materials, laboratory or fieldwork safety, as well as the ethics and standards involved with scientific research.
- Determine whether the student's research project requires IRB/IACUC/IBC/RCR training or approval and ensure the student receives the proper training or approval before beginning research.
- Work closely with the student to develop a feasible thesis project and provide assistance in research methods and data analysis.
- Work with the student to develop a reasonable timeline for the completion of the thesis project.
- Meet regularly with the student to evaluate the progress of his/her research, to assist with troubleshooting and provide support.
- Inform the Thesis Advisory Committee of any substantial divergence from the approved timeline.
- Approve the student's thesis work or presentations prior to review by the Thesis Advisory Committee.

MCB Student Responsibilities

As the author of the project, the student is ultimately responsible for the design and execution of the thesis project through all phases. The duties and responsibilities of the student include, but are not limited, to the following:

- Work with the thesis advisor to develop the thesis idea, proposal, experimental methods and a reasonable timeline for completion of experiments.
- Work with the thesis advisor to identify and secure appropriate Thesis Advisory Committee members.
- Schedule regular meetings with the thesis advisor to discuss the project and its progress.
- Be familiar with the university policies on academic honesty and integrity (<https://www.qu.edu/content/dam/qu/documents/policies/academic-integrity-policy.pdf>). Misconduct in these areas will be treated seriously, and can result in academic dismissal.
- Make certain you understand the proper precautions to be taken when working with chemicals, reagents and lab equipment. Remember to ask if you are ever uncertain how to proceed in a situation.
- Be aware of Thesis Advisory Committee meeting deadlines and your defense date and submit written materials to committee members at least one week before any meeting.
- Be proactive in your education. Take the initiative to work hard, be precise, learn from your mistakes and grow as a scientist. Think critically about your research and take the time to write an outstanding thesis manuscript.

Requirements:

At the end of their 2nd semester in the program, students who have a > 3.5 GPA may declare their interest in pursuing the thesis track. Students should seek approval to enter the track from the MCB director and have a written commitment from a prospective mentor. Given the time commitment, students are strongly encouraged to seek the Thesis track only if they do not have a full-time job.

Typical timeline:

During their first 2 semesters, MCB students who are interested in the thesis track should contact potential research mentors either at Quinnipiac or outside and, if possible, rotate in lab doing volunteer research to see if lab, mentor and student are a good fit.

Timeline (typical):

- Prior semesters: Volunteer research work in mentor's lab.
- BIO 649: Independent Study – Thesis (Summer)
 - Perform preliminary experiments and complete written Thesis Proposal and present Oral Presentation to thesis committee (due late August – early September).
- BIO 650: Thesis I (Fall)
 - Complete the bulk of the experimental research, complete a written Thesis update and present Oral Presentation to thesis committee. (Due mid-December)
- Bio 651: Thesis II. Oral defense and graduation.
 - Complete remaining experiments (late February), complete written Thesis and present Oral Thesis Defense to committee and community (late April, May).