QUANTITATIVE AND SYSTEMS BIOLOGY

Degree Types: MS

The mission of the one year Quantitative and Systems Biology (QSB) program is to train students in quantitative and systems biology approaches and techniques that will enable them to succeed in top PhD and MD programs, or to directly enter research careers in industry or academia.

Additional resources:

- Department website (https://www.molbiosci.northwestern.edu/programs/masters-degree-in-quantitative-and-systems-biology/)
- Program handbook(s)

Degree Offered

- Quantitative and Systems Biology MS (https://catalogs.northwestern.edu/tgs/quantitative-systems-biology/quantitative-systems-biology-ms/)

Learning objective(s)/Students should be able to…

- quantitatively analyze data
- write scripts and/or basic programs to analyze data sets using current computer languages/environments including R, Matlab, and Python
- contribute original research to scholarly community.
- articulate broader impacts of research
- create and communicate professional development plan

Quantitative and Systems Biology Courses

QSB 401-0 Research Techniques, Writing & Presentation (1 Unit)
Students will receive training in instruments, techniques and theory of experiments that will be used in their thesis research. Students will also learn how to present scientific work in different formats including written abstracts and outlines, and oral presentations. Presentations by speakers in the MBS seminar series will be critiqued to illustrate principles of effective communication.

QSB 499-0 QSB Masters Research (1 Unit)
This course is taken by students in the Quantitative and Systems Biology program. It consists of research in the student's research laboratory.

QSB 590-0 QSB Thesis Research (3 Units)
This course is taken by students in the Quantitative and Systems Biology program. It consists of research in the student's research laboratory and preparing their masters thesis.

QSB 595-0 Internship (0 Unit)
Students will perform an internship in an NU core facility, NU laboratory or a non-NU company.