

School of Biological Sciences
Illinois State University

Program Learning Objectives for the M.S. Degree

The M.S. program in Biological Sciences prepares students for careers in biology-related fields or continuing to Ph.D. and professional programs. Students in the program gain a deep understanding of the discipline of biology through advanced course work and performing research.

- First, they develop an in depth understanding of advanced concepts of biology within the entire field as well as a chosen discipline.
- Next, they develop advanced scientific literacy. The ability to critically read and evaluate primary scientific literature will be stressed as well as developing the ability to write well using the technical style accepted within the discipline.
- Finally, they develop an understanding of biological research through performing a research project of their own.

Program Goal	In depth understanding of advanced concepts of biology					
Outcomes	Data Needed	Data Already Available	What group will be assessed	Assessment Methods	Who will conduct assessment	Timeline
Demonstrating command of material through performance in graduate classes	Student scores on exams & labs	Yes	Students enrolled in BSC graduate classes	Direct: Examinations, papers, presentations	Course instructors will perform immediate assessment; School Graduate Studies Committee will collect and review performance	Annual
Demonstrating command of material during oral defense of thesis	Record of thesis defenses	Yes, but form could be modified to be more informative	M.S. candidates who defend their thesis	Oral examination on biological concepts	Thesis committee members	Annual

Program Goal	Developing advanced scientific literacy					
Outcomes	Data Needed	Data Already Available	What group will be assessed	Assessment Methods	Who will conduct assessment	Timeline
Ability to critically evaluate and discuss primary literature	Student scores from graduate seminar classes	Yes	All M.S. students are required to take graduate seminars	Direct: papers, presentations, and discussions covering primary manuscripts	Course instructors will perform immediate assessment; School Graduate Studies Committee will collect and review performance	Annual
Ability to critically evaluate and discuss primary literature	Student performance at thesis defense	Yes	M.S. candidates who defend their thesis	Direct: Oral examination including command of current literature in discipline	Thesis committee members	Annual
Ability to write in a manner consistent with the field	Student performance on thesis	Yes	M.S. candidates who defend their thesis	Direct: Defense of thesis including content and style	Thesis committee members	Annual

Program Goal	Developing understanding of biological research					
Outcomes	Data Needed	Data Already Available	What group will be assessed	Assessment Methods	Who will conduct assessment	Timeline
Becoming independent researcher capable of directing a discrete project	Student thesis and defense	Yes	M.S. candidates who defend their thesis	Direct: Defense of research proposal and thesis and discussions with committee on thesis project	Thesis advisor will assess day-to-day progress; Thesis committee will oversee long-term progress	Annual
Ability to critically evaluate and discuss research approaches in primary literature	Student scores from graduate seminar classes	Yes	All M.S. students are required to take graduate seminars	Direct: papers, presentations, and discussions covering primary manuscripts	Course instructors will perform immediate assessment; School Graduate Studies Committee will collect and review performance	Annual