

**MS IN BIOLOGY**  
Fall 2022 – Spring 2023

Requirement	Course	Credits	Term	Year	Grade
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**I. Core (12 credits)**

Graduate Seminar in Biology	BIO 510	3	_____	_____	_____
Experimental Design and Analysis	BIO 511	3	_____	_____	_____
Topics and Research Methods in Cellular, Microbial, and Molecular Biology	BIO 520	3	_____	_____	_____
Topics and Research Methods in Ecology, Evolution, and Organismal Biology	BIO 521	3	_____	_____	_____

**II. Electives (15 credits)**

Select 15 credits from: Any other graduate biology course except BIO 593, 609, and 610. Up to six credits of 400-level biology courses, where no 500-level course is available. Up to six credits of graduate course work from another department or university, pending advisor approval.

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

**Electives – Thesis Option (9 credits)**

Select nine credits from: Any other graduate biology course, except BIO 591 and 593. Up to six credits of 400-level biology courses, where no 500-level course is available. Up to six credits of graduate course work from another department or university, pending advisor approval. Electives may not be repeats of courses unless the technique/topic changed significantly.

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

*Common elective courses include:*

BIO 513	Research Techniques I	BIO 565	Immunology
BIO 514	Research Techniques II	BIO 566	Plant Physiology and Biochemistry
BIO 515	Research Techniques III	BIO 570	Population Biology
BIO 531	Molecular Genetics	BIO 571	Wetlands
BIO 535	Course Topics in Biology I	BIO 575	Plant Communities
BIO 536	Course Topics in Biology II	BIO 576	Freshwater Ecology
BIO 537	Course Topics in Biology III	BIO 580	Light Microscopy
BIO 564	Microbial Physiology	BIO 585	Epidemiology

**III. Research (3 credits)**

Directed Research in Biology <sup>@</sup>	BIO 591	3	_____	_____	_____
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**Research – Thesis Option (9 credits)**

Thesis Proposal <sup>#</sup>	BIO 608	3	_____	_____	_____
Thesis Research <sup>^</sup>	BIO 609	3	_____	_____	_____
Thesis and Defense <sup>*</sup>	BIO 610	3	_____	_____	_____

## Notes and Requirements

@ The student must present the results of the project in an open seminar to complete BIO 591. In addition, the student must pass a written examination prepared by the student's Advisory Committee. Students who fail this examination will not receive a grade for the course.

#A Thesis Committee must be formed and meet with the student to discuss course work and research ideas, and the Committee Composition section of the MS Student Progress Checklist – Thesis Option must be completed and submitted to the Graduate Coordinator at least a week before the semester starts, or the student cannot enroll in BIO 608.

^A letter grade must be given for BIO 608 before the student can enroll in BIO 609. Paperwork must be filed at least a week prior to the start of the semester BIO 609 is to be conducted.

\*A letter grade must be given for BIO 609 before the student can enroll in BIO 610. Paperwork must be filed at least a week prior to the start of the semester BIO 610 is to be conducted. To complete BIO 610, the student must present their research in an open seminar and pass a thesis defense before their Thesis Committee. The degree will not be awarded until the Committee has accepted the thesis and it is signed by Graduate School Dean.

Part-time students will be required to take the same group of courses as full-time students except they must complete BIO 608 by the end of year three. As with full-time students, part-time students cannot take BIO 609 unless they have received a grade for BIO 608. In addition, they must take BIO 610 by the start of year six and complete it by the end of that year.

### **Suggested Sequence for the MS**

____ ____ ____	<b>Semester #1 (9credits)</b> BIO 510 (3) BIO 520 (3) Elective 1 (3)	____ ____ ____	<b>Semester #2 (9 credits)</b> BIO 511 (3) BIO 521 (3) Elective 2 (3)
____ ____ ____	<b>Semester #3 (9 credits)</b> Elective 3 (3) Elective 4 (3) Elective 5 (3)	____	<b>Semester #4 (3 credits)</b> BIO 591 (3)

### **Thesis Option**

____ ____ ____	<b>Semester #1 (9credits)</b> BIO 510 (3) BIO 520 (3) Elective 1 (3)	____ ____ ____	<b>Semester #2 (9 credits)</b> BIO 511 (3) BIO 521 (3) BIO 608 (3)
____ ____ ____	<b>Semester #3 (9 credits)</b> BIO 609 (3) Elective 2 (3) Elective 3 (3)	____	<b>Semester #4 (3 credits)</b> BIO 610 (3)