

BIOLOGY, MASTER OF SCIENCE (M.S.)

Graduate study in biology is designed to prepare students for careers in teaching and research in state, federal and private institutions, including at the university level or in private laboratories. Graduate study in Biology leads to the Master of Science (M.S.) degree. Students typically complete the degree requirements in two years of full-time work. However, the duration to complete the program may vary based on individual differences in student backgrounds and experience levels. It is recommended that interested students contact the department for more information about research and other departmental activities related to the graduate program. Graduate study is characterized by smaller, more focused classes, closer interactions with qualified faculty, and opportunities for independent research. The low student-faculty ratio in the Department creates a dynamic, supportive atmosphere and allows greater access to the facilities and expertise that will make your education a success.

Students with undergraduate majors in biology and other science areas are encouraged to pursue graduate work in Biology. The Department's Graduate Committee will review your background in Biology, Chemistry, Mathematics, and Physics, and will determine what additional coursework (if any) you may need.

Please contact the department for information about research and other departmental activities related to the graduate program.

Admission Requirements

Students must have appropriate GRE test scores as determined by the Graduate Committee. Applicants are encouraged to contact the Department of Biology for information about sufficient scores in different areas. All applicants must have a minimum of thirty-two (32) semester hours of biology. Additionally, a minimum of eight semester hours of general chemistry and four semester hours of organic chemistry is required. Six semester hours of mathematics is also required. Applicants who do not possess the necessary requirements may be admitted into the program on a provisional basis. Students will be expected to make up deficiencies identified by the graduate committee.

Thesis Option

The thesis option allows students to increase their knowledge of biology and become involved with graduate-level research in biology with an eye on research careers or preparation for further graduate or professional school work. To complete the program, a minimum of 30 semester hours, including all core courses and the thesis, is required for the M.S. degree. Each student, with a faculty advisor, plans a tentative graduate program early in the first semester. Students are encouraged to begin their independent research in the second semester of their first year. The student's committee should be formed no later than one semester after admission to candidacy and should meet each semester thereafter to monitor the student's progress (in both research and coursework). Every effort is made to plan the graduate program around the needs and interests of the students.

Non-Thesis Option

The non-thesis degree is designed for students who must take additional course work to raise their academic credentials for application to medical, dental, or other professional schools, or are employed full

time. Each student enrolled in the non-thesis option must complete a minimum of 36 semester hours, including all required core courses except BIOL 524 Research and Thesis. While these courses include Investigations and Research, in which students complete an independent research project, it should be noted that the research experience is not as extensive as in the thesis option, and therefore limits the marketability of students pursuing this option. In order to complete the degree, students must pass a written and/or oral comprehensive examination.

Code	Title	Credit Hours
Core Courses		13
BIOL 513	Seminar	1
BIOL 522	Investigations In Biology	3
BIOL 525	Leading a Biology Lab Course	3
BIOL 542	Advanced Biochemistry	3
STAT 511	Biometry	3
or PSYC 580	Stat Methods in Health Psyc I	
or STAT 510	Stat Procedures In Ed & PSYC	
Thesis Option - Students must take the following:		3
BIOL 524	Research & Thesis	
Non-Thesis Option - Students must take the Comprehensive Exam		0
Restricted Electives**		14-23
BIOL 508	Biology & Human Affairs	
BIOL 510	Human Genetics	
BIOL 510	Human Genetics	
BIOL 511	Topics In Modern Biology	
BIOL 514	Endocrinology	
BIOL 515	Advd Invertebrate Zoology	
BIOL 518	Advanced Plant Physiology	
BIOL 520	Cytology	
BIOL 521	Plant Morphogenesis	
BIOL 526	Experimental Embryology	
BIOL 533	Introduction to Neuroscience	
BIOL 546	Advanced Immunobiology	
BIOL 548	Molecular Biology	
BIOL 551	Topic in Molecular Biol & Geno	
BIOL 552	Topic in Ecology and Evol Biol	
BIOL 553	Topic in Organismal Biology	
BIOL 554	Topic in Computational Biology	

****Students who select the Thesis Option must select 14 credit hours from the Restricted Electives. Students who select the Non-Thesis Option must select 23 credit hours from the Restricted Electives.**