

BIOLOGY

Master of Science (MS)

This is a guide based on the 2023-2024 Graduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on factors such as dual enrollment, remediation, and summer enrollment. Students meet with an academic advisor each semester and use Degree Works to monitor their progress.

CURRICULUM CHECKLIST

Required Courses:

- BI688 Experimental Design in Biology (3)
- Biology electives – choose 18 hours from BI, BO, BT, or ZO 500-600 level courses
- Electives – choose 6-9 hours of graduate level courses (500-600 level)

Choose One of the Following Options

THESIS OPTION:

Choose 3-6 hours from the following:

- BI694 Thesis (3)
- BI696 Thesis (2)
- BI697 Thesis (1)
- GR699 Oral Exam (0)

NON-THESIS OPTION:

Choose 3-6 hours of Research or Internship

- BI582 Internship in Biology (1-3)
- BI589/BI590/BI591 Biological Research (1-3)
- GR609 Capstone Project (0)
- OR
- GR698 Comprehensive Exam (0)

Other potential courses from BI, BO, BT, and ZO

- BI500 Fundamental Concepts of Bioenergetics (3)
- BI501 Fundamental Concepts of Genetics (3)
- BI543 Pathogenic Microbiology (2)
- BI544 Pathogenic Microbiology Laboratory (1)
- BI551-553 Biology Field Studies (1-3)
- BI570 The Development of Instructional Materials for Courses in the Biological Sciences (1)
- BI589-591 Biological Research (1-3)
- BI600 Health Physics (3)
- BI604 Cell Biology (3)
- BI614 Current Problems in Cell and Molecular Biology (3)
- BI620 Principles of Wildlife Management (3)
- BI625 GIS Planning for Emergency Management (3)
- BI630 Management of Wildlife Habitat (3)
- BI634 Marine Evolutionary Ecology (3)
- BI635 Conservation Biology (3)
- BI638 Biogeography (3)
- BI640 Ecology and Management of Wetlands (3)
- BI642 Immunology (3)
- BI643 Epidemiology (3)
- BI645 Microbial Physiology (3)
- BI647 Fundamentals of Disaster/Emergency Management and Planning (3)
- BI648 Disaster/Emergency Planning and Response (3)
- BI649 Vulnerability, Risk Reduction, and Critical Incident Management (3)
- BI650 Investigative Molecular Biology and Biotechnology (3)
- BI652 Freshwater Ecology (3)
- BI653 Occupational Health (3)
- BI654 Risk Assessment Applications (3)
- BI655 Industrial Hygiene (3)
- BI656 Fundamental Risk Communication in Emergency Management (3)
- BI658 Analytical Bioinformatics (3)
- BI660 Introduction to Toxicology (3)
- BI669 Wildlife Toxicology (3)
- BI684, BI693 Readings in Biology (1-2)
- BI685 Topics in Biology (3)

Curriculum Continued...

- BI688 Experimental Design (3)
- BO501 Fundamental Concepts of Botany (3)
- BO645 Plant Physiology (3)
- BO661 Native Aquatic Plants (3)
- BO669 Field Botany (3)
- BT650 Investigative Molecular Biology and Biotechnology (3)
- ZO501 Fundamental Concepts of Zoology (3)
- ZO614 Developmental Biology (3)
- ZO620 Animal Behavior (3)
- ZO630 Invertebrate Zoology (4)
- ZO641 Parasitology (3)
- ZO651 Vertebrate Histology (3)
- ZO659 Mammalogy (3)
- ZO660 Herpetology (3)
- ZO665 Entomology (3)
- ZO666 Ornithology (3)
- ZO669 Vertebrate Adaptations (3)
- ZO678 Ichthyology (3)

Degree Requirements

* The curriculum of every graduate student in biology varies with their interests in biology, i.e., graduate students in biology often pinpoint a specific area of biological investigation and focus the majority of their attention toward developing their skills in that area of emphasis. Thus, no two curricula of graduate students will be the same. A graduate student in biology creates their degree plan (including course curriculum) with their advisor during their first semester in graduate school. This includes at least 30 total credit hours that are partially accomplished through credit hours of biology courses (BI, BO, BT, and/or ZO) However, there are courses that every graduate student in biology will have to complete for graduation.

Admission Requirements

In addition to the criteria established for general admission to graduate studies, applicants must have the following:

1. An undergraduate GPA of 2.75 on a 4.0 scale
2. Minimum 2.75 GPA on a 4.0 scale for the last 30 semester hours of undergraduate science and math courses
3. Faculty Sponsor Agreement
4. Two letters of recommendation addressing the applicant's potential for academic success. Letters are waived if a completed Faculty Sponsor Agreement for Curriculum A/Thesis is submitted.
5. Letter of intent that details the applicant's interests in biology and future goals after obtaining a graduate degree in biology

Revised 6/22/2023

2023-2024 *degree map*

