

NATURAL SCIENCES (MS) - BIOLOGY TRACK

Program Overview

The M.S. in Natural Sciences program develops a broad-based scientific background in one of four tracks: Biology, Chemistry, Environmental Science, Geosciences. The program also develops the research skills necessary to design and conduct original research.

The opportunity to take graduate courses in a specific track or combine graduate courses from each of the tracks allows the student to design a graduate course of study to suit his or her own specific interests and goals. The two-year curriculum allows students to focus on required courses and complete research in a timely manner. Graduate assistantship employment opportunities provide tuition and competitive stipends.

The Natural Sciences Program has:

Broadly trained faculty with diverse areas of expertise with regional, national and international research programs.

Well-equipped, modern laboratories as well as access to protected natural areas.

A wide variety of study-abroad courses that allow students to conduct research projects abroad.

The Master of Science in Natural Sciences Biology Track emphasizes development of a broadly-based scientific background as well as research skills necessary to design and conduct original research. The opportunity to take graduate courses in biology and focus in a specific sub-discipline of biology or combine graduate courses from geology and environmental sciences allows the student to design a graduate course of study to suit his or her own specific interests and goals.

In the first year, students take courses stressing communication skills necessary to present reports and research results, research design and data analyses as well as electives allowing specialization in particular areas of interest. Students select a three-member faculty advisory committee to guide their course options. One faculty member from the advisory committee will serve as the faculty mentor.

Career Opportunities

Graduates of the program will be able to pursue a broad range of careers in the natural sciences. Common areas of employment include public agencies, non-profit organizations, government service, and private business. Students will also be prepared to move into a doctoral-level degree program.

Program of Study Thesis Option

Code	Title	Credit Hours
Area 1 Program Core		
ENGL 5149G	Grant Writing	3
Area 1 Total		3
Area 2 Thesis Option Program Concentration		

BIOL 6795	Biology Seminar Series (take 4 times for credit)	4
BIOL 6215	Principles of Experimental Design and Applications in Biology	4
Select one Biology Elective from the following:		3-4
BIOL 6515	Advanced Selected Topics in Cellular and Molecular Biology	
BIOL 6516	Advanced Selected Topics in Organismic Biology	
BIOL 6517	Advanced Selected Topics in Ecological and Evolutionary Biology	
BIOL 6555	Selected Topics in Biology	
Select 6-7 credits of any 5000+ BIOL, CHEM, ENVS, GEOL, GEOG with advisor approval ¹		6-7
Area 2 Total		18
Area 3 Thesis Option		
BIOL 6931	Master of Science Thesis Research (repeated for a total of 15 hours)	15
BIOL 6000	Masters Thesis Defense	0
Area 3 Total		15
Total Credit Hours		36

¹ Except BIOL 6821 Master of Science Literature / Topic Paper, which cannot be used in this area

Non-Thesis Option

Code	Title	Credit Hours
Area 1 Program Core		
ENGL 5149G	Grant Writing	3
Area 1 Total		3
Area 2 Non-Thesis Option Program Concentration		
BIOL 6795	Biology Seminar Series (take 4 times for credit)	4
BIOL 6215	Principles of Experimental Design and Applications in Biology	4
Select one Biology Elective from the following:		3-4
BIOL 6515	Advanced Selected Topics in Cellular and Molecular Biology	
BIOL 6516	Advanced Selected Topics in Organismic Biology	
BIOL 6517	Advanced Selected Topics in Ecological and Evolutionary Biology	
BIOL 6555	Selected Topics in Biology	
Select 15-16 credits of any 5000+ ATSC, BIOL, CHEM, ENVS, GEOL, GEOG with advisor approval ¹		15-16
Area 2 Total		27
Area 3 Non-Thesis Option		
Select 6 credit hours from the following:		6
BIOL 6821	Master of Science Literature / Topic Paper	
BIOL 6605	Master of Science Biology Internship	
Area 3 Total		6
Total Credit Hours		36

¹ Except BIOL 6821 Master of Science Literature / Topic Paper, which cannot be used in this area

Admission Requirements

In addition to the Columbus State University Graduate School Admissions requirements, all interested applicants must submit the following materials to be considered for admission for all tracks in the Natural Sciences program.

- Baccalaureate degree from an accredited college or university, demonstrated excellent preparation in the Biological, Chemical, Environmental and/or Geological Sciences or permission of the program director.
- Undergraduate grade point average of at least 3.0 on a 4.0 scale.
- A minimum combined score of 290 on the verbal and quantitative portions of the Graduate Record Exam. The GRE must have been taken in the last five years.
- A one page statement of experience and interests.
- Two letters of reference. References should come from persons familiar with the applicant's academic or professional experience

Additional Program Requirements

The maximum course load for a graduate student in a given semester is 12 semester hours. The maximum course load for a student holding a graduate assistantship is 10 semester hours.