

The Applied Biology major focuses on the practical uses of basic biological information within two thematic concentrations: Environmental Biology and Human Biology & Health Sciences. A biological sciences major provides opportunities for students to study the building blocks of life as they take classes in evolution, genetics, microbiology, plant biology and zoology. Completing this major earns you professional certifications and will prepare you to be a professional biologist.

RECOMMENDED FOUR-YEAR PLAN

First Year

First Semester • 16 Credit Hours	Second Semester • 15-16 Credit Hours
ENG 111 English Composition (3)	BIO 116 Biological Concepts: Structure, Function, Cellular and Molecular Biology (4)
BIO 115 Biological Concepts: Eco, Evo, Genetics and Diversity (4)	ECO 201 Microeconomics (3) or POL 241 American Political System (3)
GLG 121 Environmental Geology (3)	GLG 115L Understanding the Earth (1)
PA Creative Arts (3)	STA 261 Statistics (4) or MTH 151 Calculus (5)
ELECTIVE Elective (3)	PA Global Citizenship (3)

Freshmen are strongly encouraged to take UNV 101 their first semester.

Second Year

First Semester • 14 - 15 Credit Hours	Second Semester • 15 Credit Hours
BIO 206 Evolutionary Biology (3)	BIO 209 Fundamentals of Ecology (3)
CHM 141/R College Chemistry I (3-4)	BSC 292 Applied Bio Sophomore Seminar (1)
CHM 144 College Chemistry I Lab (2)	CHM 142 College Chemistry II (3)
MAJOR Tool Course 1 (3)*	CHM 145 College Chemistry II Lab (2)
ELECTIVE Elective (3)	PA Global Citizenship (3)
	MAJOR Tool Course 2 (3)*

Third Year

First Semester • 16 Credit Hours	Second Semester • 16 - 19 Credit Hours
MAJOR select 3 from BIO 205, 311, 312, 314, or BSC 313 (4)	MAJOR select 3 from BIO 205, 311, 312, 314, or BSC 313 (4)
MAJOR Professional Course 1 (3)*	BIO 342 Genetics (3)
MAJOR Tool Course 3 (3)*	GLG 244 Oceanography (3) or GLG 307 Water & Society (3)
PA Global Citizenship (3)	PA Global Citizenship (3)
PA Advanced Writing (3)	PA Social Science (3)
	MP Experiential Learning (BSC 321 satisfies EL requirement (0-3))

Fourth Year

First Semester • 16 Credit Hours	Second Semester • 13 Credit Hours
MAJOR select 3 from BIO 205, 311, 312, 314, or BSC 313 (4)	BSC 492 Applied Bio Senior Seminar (1)
MAJOR Tool Course 4 (3)*	MAJOR Tool Course 5 (3)*
MAJOR Professional Course 2 (BSC 415 or BSC 475 recommended) (3)*	CAPSTONE if not completed by Professional Course 2 or ELECTIVE Elective (3)
PA Humanities (3)	MAJOR Tool Course 6 (3)*
ELECTIVE Elective (3)	ELECTIVE Elective (3)

* Professional and Tool Courses should be chosen in consultation with a faculty advisor

This planning sheet does not guarantee offer of classes in any given semester; please consult with an Advisor to schedule your classes appropriately. Your degree audit is your official program record.

CAREER OPTIONS

The Applied Biology major includes two professional certificates and a “tool” requirement. Professional biologists with training in Environmental Biology are required by regional employers such as Procter & Gamble, the U.S. Environmental Protection Agency (USEPA), the Cincinnati Zoo, and many environmental consulting firms. Graduates can pursue a variety of careers including but not limited to:

- Lab Technicians and Research Assistants
- Science Teachers
- U.S. and Ohio EPA Field and Lab Positions
- Field Biologists
- Natural Resource Managers
- Technical Writers

GRADUATION REQUIREMENTS

Students must earn a minimum of 124 credit hours and achieve an overall GPA of 2.0 in order to qualify for graduation. Students should consult with their DAR and advisor to ensure that all degree requirements are met prior to graduation.

<http://bulletin.miamioh.edu/liberal-arts-applied-science/applied-biology-bs/>

TOOL REQUIREMENT

The Applied Biology major includes elective hours and requires the completion of a “tool” requirement - a non-biology minor or certificate that provides students with additional skills that are useful to professional biologists. Students can self-design a tool, with departmental approval. Tools in the Applied Biology major include:

- Commerce Minor
- Data Intelligence Minor
- Forensic Investigation Minor
- Psychological Sciences Minor
- GIS Certificate

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