

# BA in Biological Sciences with Ecological/Environmental/Organismal Emphasis

## Program Requirements

A minimum total of 120 credit hours is required for the BA in biological sciences with an ecological/environmental/organismal emphasis. In addition to meeting the requirements of the WSU General Education Program (<http://catalog.wichita.edu/undergraduate/academic-information/general-education-program/>) and the requirements of Fairmount College of Liberal Arts and Sciences, students must meet the following requirements:

A major in biological sciences leading to the BA in biological sciences with an ecological/environmental/organismal emphasis requires 35 credit hours of biological sciences coursework. Students must maintain a grade point average of 2.000 in all biological sciences coursework.

Course	Title	Hours
<b>General Education</b>		
Select courses to meet General Education requirements <sup>1</sup>		34-35
<b>College Requirements</b>		
LAS Competencies and Electives - select enough courses to reach 120 credit hours and complete all LAS Competency Areas <sup>1</sup>		34-37
<b>Major Required Courses</b>		
BIOL 210	General Biology I	4
BIOL 211	General Biology II	4
BIOL 417	Evolution	3
BIOL 418	General Ecology	4
BIOL 419	Genetics	4
BIOL 420	Molecular Cell Biology	4
BIOL 497 or BIOL 499	Biology Colloquium Undergraduate Research	1-2
<b>Major Elective Courses</b>		
Select additional approved ecological/environmental/organismal electives <sup>2</sup>		10-11
BIOL 330	General Microbiology	
BIOL 330L	General Microbiology Lab	
BIOL 481	Cooperative Education	
BIOL 499	Undergraduate Research	
BIOL 502	Vascular Plants	
BIOL 503	Field Botany	
BIOL 510	Ecosystem Management and Restoration	
BIOL 524	Vertebrate Zoology	
BIOL 524L	Vertebrate Zoology Lab	
BIOL 527	Comparative Anatomy	
BIOL 527L	Comp Anat Lab	
BIOL 528	Parasitology	
BIOL 530	Applied and Environmental Microbiology	
BIOL 532	Entomology	
BIOL 540	Developmental Biology	
BIOL 540L	Developmental Biology Lab	
BIOL 542	Molecular Genetics	
BIOL 560	Plant Ecology	
BIOL 570	Conservation Biology	
BIOL 590	Immunobiology	
BIOL 610A-Z	Topics in Botany	
BIOL 626	Reproductive Biology	
BIOL 640A-Z	Topics in Zoology	

BIOL 640CA	Herpetology
BIOL 640CL	Herpetology Lab
BIOL 640CB	Field Vertebrate Zoology (Sequence)
BIOL 640CC	Desert Field Ecology
BIOL 645	Discoveries in Developmental Biology
BIOL 660K	Astrobiology
BIOL 661	Pathogenic Microbiology
BIOL 710	Glycobiology
BIOL 725	Biodiversity Analyses
BIOL 738	Plant and Animal Interactions
BIOL 740D	Computing for Biologists
BIOL 740I	Experimental Design
BIOL 760	Experimental Molecular Biology Lab
BIOL 767	Mechanisms of Hormone Action
BIOL 773	Statistical Applications in Biology

## Additional Science Requirements for Ecological/Environmental/Organismal

CHEM 211	General Chemistry I	5
CHEM 212	General Chemistry II	5
CHEM 531	Organic Chemistry I	5

**Total Credit Hours** **120**

<sup>1</sup> Required major courses may also count towards General Education and/or LAS Competencies. Students will need to select additional electives to reach 120 credit hours required for graduation with assistance from an advisor.

<sup>2</sup> See list of excluded courses (<http://catalog.wichita.edu/undergraduate/fairmount-liberal-arts-sciences/biological-sciences/>) (nonmajor courses may not be used to satisfy the requirements for the major).

## Applied Learning

Students in the BA in biological sciences with ecological/environmental/organismal emphasis program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing BIOL 418 and/or BIOL 499.