

B.S. Biology, Ecology and Conservation Biology Concentration

Program Admissions Requirements

There are no program admission requirements for the BS in Biology, Ecology and Conservation Biology.

General Education

The listing below includes program requirements that also fulfill General Education requirements.

Code	Title	Credits
Objective 1		6
Objective 2		3
Objective 3 - MATH 1160 or MATH 1170		3
Objective 4		6
Objective 5 - BIOL 1101, BIOL 1101L, PHYS 1111		7
Objective 6		6
Students must fulfill Objective 7 or Objective 8		3
Objective 7		
Objective 8		
Objective 9		3
Total Credits		37

Major Requirements

Code	Title	Credits
BIOL 1101 & 1101L	Biology I and Biology I Lab (Partially satisfies General Education Objective 5)	4
BIOL 1102 & 1102L	Biology II and Biology II Lab	4
BIOL 1191	Wonder about Biology	1
BIOL 2206 & BIOL 2207	Cell Biology and Cell Biology Laboratory ¹	4
BIOL 2209 & 2209L	General Ecology and General Ecology Laboratory	4
BIOL 3316	Biometry Laboratory	1
BIOL 3358	Genetics	3
BIOL 4417	Organic Evolution	3
BIOL 4491 or BIOL 4492	Seminar	1
MATH 1160 or MATH 1170	Survey of Calculus (Satisfies General Education Objective 3) or Calculus I	3-4
MATH 3350	Statistical Methods	3
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Lab (Partially satisfies General Education Objective 5)	5
CHEM 1112 & 1112L	General Chemistry II and General Chemistry II Lab	4
CHEM 3301 & CHEM 3303	Organic Chemistry I and Organic Chemistry Laboratory I	4

PHYS 1111 & PHYS 1113	General Physics I and General Physics I Laboratory	4
Select two of the following:		7

CHEM 3302 & CHEM 3304	Organic Chemistry II and Organic Chemistry Laboratory II	
PHYS 1112 & PHYS 1114	General Physics II and General Physics II Laboratory	
BIOL 4432	Biochemistry	

Ecology and Conservation Biology Concentration Requirements

Field Research: 4

BIOL 4489 or BIOL 4493	Field Ecology or Senior Thesis	
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Ecology Courses: (minimum of 7 credits)* 7

BIOL 1192	Careers in Ecology and Conservation Biology	
BIOL 3337	Conservation Biology	
BIOL 4408 & 4408L	Plant Ecology and Plant Ecology Lab	
BIOL 4416 & 4416L	Population Ecology and Population Ecology Lab	
BIOL 4418	Ecological Topics	
BIOL 4442	Plant Animal Interactions	
BIOL 4459 & 4459L	Fish Ecology and Fish Ecology Laboratory	
BIOL 4462 & 4462L	Freshwater Ecology and Freshwater Ecology Lab	
BIOL/GEOL 4490	Ecosystem Ecology and Global Changes	

Diversity or Evolutionary Courses: (minimum of 7 credits)* 7

BIOL 2213	Fall Flora	
BIOL 2214	Spring Flora	
BIOL 4423	General Parasitology	
BIOL 4426 & 4426L	Herpetology and Herpetology Lab	
BIOL 4427 & 4427L	Ichthyology and Ichthyology Lab	
BIOL 4431 & 4431L	General Entomology and General Entomology Lab	
BIOL 4434 & 4434L	Microbial Diversity and Microbial Diversity Lab	
BIOL 4435	Vertebrate Paleontology	
BIOL 4438	Ornithology	
BIOL 4441 & 4441L	Mammalogy and Mammalogy Lab	
BIOL 4495	Animal Behavior	

Additional Biology, Research and Quantitative Courses (a minimum of 6 credits) 6

Any upper division BIOL course		
BIOL 4481/4482	Independent Problems	

BIOL 2280/4480	Mentored Research Alliance
GEOL 4403 & 4403L	Principles of Geographic Information Systems and Principles of GIS Laboratory
GEOL 4404	Advanced Geographic Information Systems
GEOL 4407	GPS/GNSS Applications in Research
GEOL 4409	Remote Sensing
GEOL 4451	Field Methods in Environmental Sciences
MATH 3310	Mathematical Modeling
MATH 4457	Applied Regression Analysis
MATH 4458	Experimental Design
Total Credits	79

¹ BIOL 2233, BIOL 2233L, General Microbiology and Lab, may substitute for BIOL 2206, BIOL 2207 in the ECB and IOB concentrations.

* at least one lab course

Degree Totals

Code	Title	Credits
	Program Admission Requirements	0
	General Education	37
	Major Requirements (Required General Education credits removed.)	69
	Upper Division Free Electives	0
	Free Electives	14
Total Credits		120

ISU Degree Requirements (<https://coursecat.isu.edu/undergraduate/degreerequirements/>)

ISU General Education (<https://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>)

Major Academic Plan (MAP)