

B.S. Biology, Biomedical Sciences Concentration

Program Admissions Requirements

There are no program admission requirements for the BS in Biology, Biomedical Sciences Concentration.

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		3-4
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		37-38

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	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	Statistics for Scientists	3
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Lab	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 (Partially satisfies General Education Objective 5)	4
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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	

Biomedical Sciences Requirements

Anatomy and Physiology 8

BIOL 3301 & 3301L	Advanced Human Anatomy and Physiology 1 and Advanced Human Anatomy and Physiology 1 Lab	
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AND

BIOL 3302 & 3302L	Advanced Human Anatomy and Physiology 2 and Advanced Human Anatomy and Physiology 2 Lab	
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Upper Division BMS Electives: (minimum of 13 credits) * 13

BIOL 3306	Healthspan	
BIOL 3324 & 3324L	Developmental Biology and Developmental Biology Lab	
BIOL 4415L	Human Neurobiology Lab	
BIOL 4423	General Parasitology	
BIOL 4430	Bioethics	
BIOL 4432	Biochemistry ¹	
BIOL 4437	Experimental Biochemistry	
BIOL 4443	Endocrinology	
BIOL 4444 & 4444L	Molecular Biology and Molecular Biology Lab	
BIOL 4451 & 4451L	Immunology and Immunology Laboratory	
BIOL 4453	Foundations in Neuroscience	
BIOL 4454	Advanced Immunology	
BIOL 4475	General Virology	
BIOL 4481/4482	Independent Problems ²	
BIOL 2280 & BIOL 4480	Vertically Integrated Project and Vertically Integrated Project ²	
CPH 4406	Epidemiology	
CPH 4442	Environmental Health in Community and Public Health	
HPSS 3301 & 3301L	Physiology of Exercise and Physiology of Exercise Laboratory	
PSCI 3301	Introduction to Pharmacology	
HPSS 3302 & 3302L	Biomechanics and Biomechanics Laboratory	
PSCI 3368	Introduction to Toxicology	
NTD 3340	Nutrition for Health Professionals	
PSYC 3301	Psychopathology	

PSYC 3352	Cognitive Neuroscience	
Microbiology		4
BIOL 2233 & 2233L	Principles of Microbiology and Principles of Microbiology Lab	
Total Credits		80-81

¹ BIOL 3324 (<https://coursecat.isu.edu/search/?P=BIOL%203324>)
Developmental Biology and BIOL 4432 (<https://coursecat.isu.edu/search/?P=BIOL%204432>) Biochemistry are strongly recommended as these are often required by medical, dental, and veterinary schools.

² Up to 8 credits of Independent Problems and/or Vertically Integrated Projects can be applied to the student's undergraduate degree.

* A minimum of 8 credits in BIOL and at least one lab course, (4cr) courses that have a lab integrated fulfil the lab requirement.

Degree Totals

Code	Title	Credits
Program Admission Requirements		0
General Education		37-38
Major Requirements (Required General Education credits removed.)		70
Upper Division Free Electives		0
Free Electives		11-13
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) (<https://www.isu.edu/advising/maps/>)