BIOLOGY, B.S.

Program Learning Outcomes

Students who complete the B.S. program in Biology will be able to:

1. Demonstrate an understanding of the process of science and of the concepts and theories of biology across a broad range of organizational levels: molecular, cellular, organismal, and ecological (population, community, ecosystem).
2. Participate in the life of the Biology Department by involvement in one or more of the following areas: research, biology clubs, and/or various positions of responsibility serving as graders, tutors, and/or teaching assistants.
3. Develop a rationally defensible integration of science and faith.
4. Be prepared for post-graduate studies or science-related careers.

Code	Title	Units
Lower-Division Requirements		
BIO 2010 and BIO 2010L	Cell Biology and Biochemistry (FE) and Cell Biology and Biochemistry Laboratory (FE) [1]	4
BIO 2011 and BIO 2011L	Ecological and Evolutionary Systems (FE) and Ecological and Evolutionary Systems Laboratory (FE) [1]	4
BIO 2012 and BIO 2012L	Organismal Biology and Organismal Biology Laboratory	4
CHE 1052 and CHE 1052L	General Chemistry I (FE) and General Chemistry I Lab (FE) [1]	5
CHE 1053 and CHE 1053L	General Chemistry II and General Chemistry II Lab	4
CHE 2094 and CHE 2094L	Organic Chemistry I and Organic Chemistry I Lab	4
MTH 1044	Calculus with Applications (FE) [1]	4
PHY 1044 and PHY 1044L	General Physics I (FE) and General Physics I Lab (FE) [1]	4
PHY 1054 and PHY 1054L	General Physics II (FE) and General Physics II Lab (FE)	4
Upper-Division Requirements		
BIO 3045 and BIO 3045L	Genetics and Genetics Laboratory	4
BIO 3052	Research Methodology	3
BIO 3063 and BIO 3063L	Conservation Ecology and Conservation Ecology Laboratory	4
BIO 3080 and BIO 3080L	Molecular Biology and Molecular Biology Laboratory	4
BIO 4097	Biology Seminar	1
MTH 3063	Calculus Based Statistics with R	3
Elective Courses		
Choose a minimum of eleven (11) units from the following: [2]		11
BIO 3012	Applied Plant Biology	
BIO 3015 and BIO 3015L	Microbiology and Microbiology Laboratory	
BIO 3023 and BIO 3023L	Introduction to Oceanography and Introduction to Oceanography Laboratory	
BIO 3033 and BIO 3033L	Marine Biology and Marine Biology Laboratory	
BIO 3040	Field Biology: Neotropical Ecology	
BIO 3050 and BIO 3050L	Advanced Cell Biology and Advanced Cell Biology Laboratory	
BIO 3090 and BIO 3090L	Immunology and Immunology Laboratory	
BIO 4000 and BIO 4000L	Developmental Biology and Developmental Biology Laboratory	
BIO 4010 and BIO 4010L	Vertebrate Biology and Vertebrate Biology Laboratory	
BIO 4023 and BIO 4023L	Advanced Human Physiology and Advanced Human Physiology Laboratory	
BIO 4030 and BIO 4030L	Animal Behavior and Animal Behavior Laboratory	
BIO 4050 and BIO 4050L	Advanced Biochemistry and Advanced Biochemistry Laboratory	
BIO 4063	Methods of Teaching Secondary Science	
BIO 4070	Neuroscience	
BIO 4073 and BIO 4073L	Experimental Marine Ecology and Experimental Marine Ecology Laboratory	
BIO 4083	Introduction to Geographic Information Systems (GIS)	
BIO 4090	Internship in Biology	
or BIO 4099	Research in Biology	
Approved Off-Campus		
Total Units		**67**

[1] 12 units meet Foundational Explorations requirements.

[2] Courses and their corresponding lab (if applicable) must be taken concurrently.