

SLO 1. Students will demonstrate an understanding of core concepts spanning scales from molecules to ecosystems, by analyzing biological scenarios and data from scientific studies. Students will correctly identify and explain the core biological concepts involved relative to: biological evolution, structure and function, information flow, exchange, and storage, the pathways and transformations of energy and matter, and biological systems.

SLO 2. Students will select and competently use laboratory equipment, field equipment, and technologies to collect and manage data, consistent with professional expectations in the biological sciences.

SLO 3. Students will demonstrate the ability to ask and answer questions in the biological sciences by applying the process of science to designing and conducting experiments. To this end, students will appropriately use models and simulations, construct explanations based on evidence derived from the analysis of data and explain the interdisciplinary nature of science as appropriate.

SLO 4. When given problems or proposing, designing and analyzing biological research questions, students will demonstrate competency in critical thinking, quantitative, analysis and oral and written communication skills essential to career development in the biological sciences by presenting their work both orally and in writing in a manner consistent with professional expectations.

Course Number	Course Title	SLO 1	SLO 2	SLO 3	SLO 4
BIO 1020	Plagues, Pandemics and Bioterrorism	I		I	
BIO 1040	What is evolution?	I		I	
BIO 1060	Human Biology	I		I	
BIO 1110	Life Science	I			
BIO 1110L	Life Science Laboratory	I	I	I	I
BIO 1150	Basic Biology	I			I
BIO 1150L	Basic Biology Laboratory	I	I	I	I
BIO 1210	Foundations of Biology: Energy, Matter, and Information	I, A		I	
BIO 1210L	Foundations of Biology: Energy, Matter, and Information Lab	I	I	I	I
BIO 1220	Foundations of Biology: Evolution, Ecology, and Biodiversity	I, A		I	
BIO 1220L	Foundations of Biology: Evolution, Ecology, and Biodiversity Laboratory	I	I	I	I
BIO 2050	Form and Function in Plants	I			
BIO 2050L	Form and Function in Plants Laboratory	I	I		I
BIO 2060	Basic Microbiology	I			
BIO 2060L	Basic Microbiology Laboratory	I	I	I	I
BIO 2070	Animal Biology	I			
BIO 2070L	Animal Biology Laboratory	I	I		
BIO 2110L	Biostatistics Laboratory	D		I	D
BIO 2120	Life Science for Elementary Educators	D			I
BIO 2120L	Life Science for Elementary Educators Lab	D		I	I
BIO 2300	Horizons in Biotechnology	I			
BIO 2340	Human Anatomy	D			I
BIO 2340L	Human Anatomy Laboratory	D			I
BIO 2350	Human Physiology	D			I
BIO 2350L	Human Physiology Laboratory	D		I	D
BIO 2370	Introduction to Invertebrate Zoology	D			I
BIO 2370L	Introduction to Invertebrate Zoology Laboratory	D		I	D
BIO 2380	Introduction to Vertebrate Zoology	D			I
BIO 2380L	Introduction to Vertebrate Zoology Laboratory	D		I	D
BIO 2400	Genetics	D		D	D
BIO 3000	Genetics and Human Issues	I			
BIO 3010	Human Sexuality	I		D	D
BIO 3030	Sexually Transmitted Diseases: Current Issues	I		D	D
BIO 3040	Environment and Society	I			
BIO 3050	Biological Bases of Contemporary Contentious Issues	I		I	I
BIO 3070	Biology of Human Pregnancy	D		D	D
BIO 3090	Biology of the Brain	D		D	D
BIO 3120	Biodiversity Conservation	D		D	D
BIO 3130	Marine Biology	D		D	D
BIO 3220	Cell and Molecular Biology	D		D	D
BIO 3240	Principles of Evolution	D		D	D

BIO	3250	Principles of Ecology	D		D	D
BIO	3250L	Ecology Laboratory	M, A	D	D	M
BIO	3500	California Flora	D		D	D
BIO	3500L	California Flora Laboratory	D	D	D	D
BIO	3600	General Epidemiology	D		D	D
BIO	3620	Applied Microbiology	D		D	D
BIO	3620L	Applied Microbiology Lab	D	M	D	M
BIO	3640	Food Microbiology	D		D	D
BIO	3640L	Food Microbiology Laboratory	D	M	D	M
BIO	4020	Developmental Biology	M, A		M	M
BIO	4020L	Developmental Biology Laboratory	D	M, A	M, A	M, A
BIO	4030	Human Genetics	D		M	M
BIO	4040	Advanced Genetics	M		M	M
BIO	4050	Population Genetics	M		M	M
BIO	4060	Regulatory Affairs and Safety Assessment	M		M	M
BIO	4080	Water Pollution Biology	M		M	D
BIO	4140	Biology of Species Invasions	M		M	D
BIO	4180	Marine Ecology	M		M	M
BIO	4180L	Marine Ecology Lab	M	M, A	M, A	M, A
BIO	4190	Neuroscience I: Cell and Molecular	M		M	M
BIO	4190L	Neuroscience I: Cell and Molecular laboratory	M	M	M	M
BIO	4200	Neuroscience II: Systems Neuroscience	M		M	M
BIO	4210	Developmental Neuroscience	M		M	M
BIO	4220	Neural Circuits of Behavior	M		M	M
BIO	4220L	Neural Circuits of Behavior Laboratory	M	M	M	M
BIO	4240	Neuromuscular Physiology	M		M	M
BIO	4260	Neuroanatomy	M		M	D
BIO	4260L	Neuroanatomy Laboratory	M	M	M	D
BIO	4290	Frontiers in Neurodegenerative Diseases Research: Disease Models and Mechanisms	M		M	M
BIO	4300	Concepts of Molecular Biology	M		M	D
BIO	4320	Molecular Biology Techniques	M		M	M
BIO	4320L	Molecular Biology Techniques Laboratory	M, A	M, A	M, A	M, A
BIO	4360	Recombinant DNA & Protein Technology	M	M	M	M
BIO	4360L	Recombinant DNA & Protein Technology Laboratory	M	M	M	M
BIO	4380	Bioinformatics	M, A		M	M
BIO	4380L	Bioinformatics Laboratory	M	M	M	M
BIO	4390	Cancer Cell Biology	M		M	M
BIO	4400	Stem Cell Biology	M		M	M
BIO	4400L	Stem Cell Biology Laboratory	M	M	M	M
BIO	4410	Internship in Biology	M	M	M	M
BIO	4450	Physiology I	M		M	M
BIO	4450L	Physiology I Lab	M, A	M, A	M, A	M, A
BIO	4460	Physiology II	M, A		M	M
BIO	4460L	Physiology II Laboratory	M	M	M	M
BIO	4480	Plant Physiology	M, A		M	M
BIO	4480L	Plant Physiology Lab	M, A	M, A	M, A	M, A
BIO	4490	Marine Botany	M		M	M
BIO	4490L	Marine Botany Lab	M	M, A	M, A	M, A
BIO	4520	Evolution of Plants	M		M	M
BIO	4520L	Evolution of Plants Laboratory	M	M	M	M
BIO	4530	Plant Anatomy	M		M	M
BIO	4530L	Plant Anatomy Laboratory	M	D	M	M
BIO	4540	Plant Genetics	M		M	M
BIO	4550	Field Biology	M		M	M
BIO	4550A	Field Biology Activity	M		M	M
BIO	4550L	Field Biology Laboratory	M	D	M	M
BIO	4560	Plant Development and Differentiation	M		M	M
BIO	4570	Plants and the Environment	M	M, A	M, A	M, A
BIO	4570L	Plants and the Environment Laboratory	M	D	M	M
BIO	4580	Ecology and Conservation of Hawaiian Ecosystems	M	M	M	M
BIO	4590AS	Ethnobotany Activity – Service Learning	M		M	M
BIO	4590S	Ethnobotany – Service Learning	M		M	M
BIO	4630	Medical Microbiology	M		M	M
BIO	4630L	Medical Microbiology Laboratory	M	M	M	M
BIO	4640	Medical Virology	M		M	M
BIO	4650	Immunology	M		M	M
BIO	4650L	Immunology Lab	M	M	M	M
BIO	4660	Microbial Physiology	M		M	M
BIO	4660L	Microbial Physiology Laboratory	M	M	M	M
BIO	4670	General Virology	M		M	M
BIO	4670L	General Virology Laboratory	M	M	M	M

BIO	4680	Microbial Ecology	M		M	M
BIO	4680L	Microbial Ecology Laboratory	M	M, A	M, A	M, A
BIO	4690	Plant-microbe Interactions	M		M	M
BIO	4690L	Plant-microbe Interactions Laboratory	M	M	M	M
BIO	4700	Hematology	M		M	M
BIO	4700L	Hematology Lab	M	M	M	M
BIO	4710	Immunohematology	M		M	M
BIO	4800	Entomology	M		M	M
BIO	4800L	Entomology Laboratory	M	M, A	M, A	M, A
BIO	4810	Histology	M		M	M
BIO	4810L	Histology Lab	M	M	M	M
BIO	4820	Ichthyology	M		M	M
BIO	4820L	Ichthyology Laboratory	M	M	M	M
BIO	4840	Herpetology	M		M	M
BIO	4840L	Herpetology Laboratory	M	M, A	M, A	M, A
BIO	4910AS	Interpretation of Science Activity – Service Learning	M		M	M
BIO	4910S	Interpretation of Science – Service Learning	M		M	M
BIO	4920L	Internship in Stem Cell Biology Laboratory	M	M	M	M

KEY
I = Introduction
D = Development
M = Mastery
A = Assessment Data Collected