

BIOLOGY MINOR

Designed to permit students majoring in another field to pursue a program of study in biology, this minor includes the fundamentals of biology as well as electives allowing students to focus on an area of interest or career relevance.

Code	Title	Credits	Completed
Minor Requirements (20 credits)			
<i>Core Courses</i>			
INBIO-110	Cells and Molecules	4	_____
INBIO-111	Evolution & Ecology	4	_____
BIO-311 or BIO-312	Genetics Cell Biology	4	_____
Two 200+ level BIO or INBIO electives ¹		8	_____
Total Credits		20	_____

¹ ENST-353 Restoration Ecology, ENST-461 Freshwater Science and Systems and HLSC-240 Microbio for Health Profession also count toward this requirement.

Upon Completion of the Biology Minor, students will be able to demonstrate understanding in the following fundamental areas of the biological sciences:

- Biological Diversity, the diversity of subspecies, species, and higher level taxa or clades, the phylogenetic relationships of those taxa, and the features that distinguish specific lineages or taxa. This concept does not include genetic or phenotypic diversity of individuals within a species.;
- Evolution, consisting of change in the hereditary characteristics of groups of organisms over the course of generations. It encompasses several subdisciplines: behavioral evolution, evolutionary developmental biology, evolutionary ecology, evolutionary genetics, evolutionary systematics, paleontology, and molecular evolution.;
- Sub-organismal biology, the structure, function, and evolution of the components of individual organisms, from the molecular level to tissue and /or organ-system level. This includes, but is not limited to, biochemistry and metabolism, proteomics, genetics, molecular and cell biology, neurobiology, and physiology.;
- Organismal biology, referring to individual organisms and their structures and processes, such as reproduction, development, life cycle events, ecophysiology, behavior, feeding, locomotion, dispersal, and mortality. Whether applied to single-celled microorganisms or to complex multicellular organisms, 'organismal' denotes specific modes of survival and reproduction and refers to the target or object of natural selection.;
- Supra-organismal biology, referring to populations, communities, ecosystems and other higher levels of biological organization such as landscape, biome or biosphere. It includes focus on patterns of diversity, community succession, species interactions, behavioral

ecology, population dynamics, trophic structure, nutrient cycling, and energy flow.

- Development of testable hypotheses, design of experiments to test hypotheses, and conducting experiments including data collection, analysis, interpretation and presentation. They will also be able to effectively search computer databases for relevant literature (primary and secondary) on scientific topics.
- Critical thinking and communication skills, both oral and written, for the purposes of conveying biological information to professional scientists and the lay public.
- Intellectual independence, scientific literacy, and an appreciation for the connections between biological science and society.