

BIOLOGY, B.S- ENVIRONMENTAL AND ORGANISMAL BIOLOGY

Core Biology Requirements

Code	Title	Credits
BIOL 130	Principles Biology I	4
BIOL 131	Principles Biology II	4
BIOL 304	Genetics	4
BIOL 440	Biology Seminar	1

Core Science and Mathematics

Code	Title	Credits
MATH 140	Statistics I	3
MATH 192	Calculus and Analytic Geometry I	4
PHYS 130		3
PHYS 1130		1
PHYS 131		3
PHYS 1131		1
CHEM 105	General Chemistry I Lecture	3
CHEM 1105	General Chemistry I Recitation/Laboratory	2
CHEM 106	General Chemistry II Lecture	3
CHEM 1106	General Chemistry II Recitation/Laboratory	2
CHEM 207	Organic Chemistry I	3
CHEM 2207	Organic Chemistry I Laboratory	1

Concentration Specific Requirements

Code	Title	Credits
BIOL 203	Biology of the Environment	4
BIOL 252	Evolution: A Biological and Geological Approach	3
STATISTICS II		3
BIOL 402	Ecology	4
CHEM 220	Environmental Chemistry	4

Concentration Specific Electives

Code	Title	Credits
BIOL 232	Invertebrate Zoology	4
BIOL 233	Principles of Botany	4
BIOL 301	General Physiology	4
BIOL 308	Plant Taxonomy	4
BIOL 302	Plant Physiology	4
BIOL 231	Comparative Anatomy	4
BIOL 418	Scanning Electron Microscopy	4
BIOL 419	Transmission Electron Microscopy	4
BIOL 332	Field Ecology	4
BIOL 303	Microbiology	4
BIOL 401	Developmental Biology	4

BIOL 450	Biology Research	3
CHEM 307	Biochemistry I	4

Free Electives (11-12 Credits)

Total - 120 credits

Graduates of the EOB Concentration will be able to:

1. Describe and analyze all aspects of the life of organisms, including their biodiversity, anatomical structure, physiology, development, biogeography, and ecology.
2. Describe and analyze the patterns and processes of genetic changes within populations over time.
3. Describe and analyze interactions between organisms and the environment, and how ecosystems function, including adaptation, distribution patterns, community interactions, biogeochemical cycles, and the effects of climate and climate change on these interactions.
4. Apply the research tools and methods used in the study of environmental and organismal biology.
5. Articulate how science relates to current problems in the modern world, especially contemporary concerns such as conservation biology, climate change, and ecosystem degradation.
6. Demonstrate understanding of scientific inquiry and explain how scientific knowledge is discovered and validated.
7. Apply quantitative knowledge and reasoning to describe or explain phenomena in the natural world.
8. Communicate scientific information in written and/or oral formats.
9. Enter into careers or pursue graduate or professional degrees utilizing skillset acquired in their major studies.