

NS 2030 - BIOLOGY

Credits: 3

In this course, students will explore the basic aspects of life on Earth. The course will cover cells, photosynthesis, DNA, genetics, evolution, natural selection, biodiversity, population dynamics, and global climate. Students will explore these topics through field trips, classroom activities, laboratory exercises, and lectures. Upon successful completion of the course, students will understand the biological, chemical, and physical processes living organisms utilize to sustain life.

Prerequisites: none

Course Learning Outcomes:	Exceeding	Meeting	Developing	Not meeting	Program Outcomes	Institutional Outcomes
Understand the nature of science to critically assess media reports of science, pseudoscience, and non-science	Analyzes the role of science to critically assess media reports of science, pseudoscience, and non-science	Explains the role of science to critically assess media reports of science, pseudoscience, and non-science	Recognizes the role of science to critically assess media reports of science, pseudoscience, and non-science	Does not understand the nature of science to critically assess media reports of science, pseudoscience, and non-science	LA1, LA6	Critical Thinking
Understand the diversity of living things	Analyzes the diversity of living things	Explains the diversity of living things	Recognizes the diversity of living things	Does not understand the diversity of living things	LA1, LA6	Critical Thinking
Understand ecological environments local to the student and in a global context	Analyzes ecological environments local to the student and in a global context	Explains ecological environments local to the student and in a global context	Recognizes ecological environments local to the student and in a global context	Does not understand ecological environments local to the student and in a global context	LA1, LA6	Critical Thinking
Understand the relevance of these ecosystems, as well as the biotic and abiotic components of these ecosystems	Analyzes the relevance of these ecosystems, as well as the biotic and abiotic components of these ecosystems	Explains the relevance of these ecosystems, as well as the biotic and abiotic components of these ecosystems	Recognizes the relevance of these ecosystems, as well as the biotic and abiotic components of these ecosystems	Does not understand the relevance of these ecosystems, as well as the biotic and abiotic components of these ecosystems	LA1, LA6	Critical Thinking
Understand the structures and purposes of these structures in prokaryotic and eukaryotic cells	Analyzes the structures and purposes of these structures in prokaryotic and eukaryotic cells	Explains the structures and purposes of these structures in prokaryotic and eukaryotic cells	Recognizes the structures and purposes of these structures in prokaryotic and eukaryotic cells	Does not understand the structures and purposes of these structures in prokaryotic and eukaryotic cells	LA1, LA6	Critical Thinking
Understand of cell structures to examples of changes in cell function	Applies cell structures as examples of changes in cell function	Explains cell structures as examples of changes in cell function	Recognizes cell structures as examples of changes in cell function	Does not understand of cell structures to examples of changes in cell function	LA1, LA6	Critical Thinking
Understand basic structures of living things using concepts of homology	Analyzes basic structures of living things using concepts of homology	Explains basic structures of living things using concepts of homology	Recognizes basic structures of living things using concepts of homology	Does not understand basic structures of living things using concepts of homology	LA1, LA2, LA4, LA6	Critical Thinking Communication Competence
Understand the relationship of the structure of living things to its function	Analyzes the relationship of the structure of living things to its function	Explains the relationship of the structure of living things to its function	Recognizes the relationship of the structure of living things to its function	Does not understand the relationship of the structure of living things to its function	LA1, LA2, LA4, LA6	Critical Thinking Communication Competence
Understand the observations that lead to theory of evolution by natural selection	Analyzes the observations that lead to theory of evolution by natural selection	Explains the observations that lead to theory of evolution by natural selection	Recognizes the observations that lead to theory of evolution by natural selection	Does not understand the observations that lead to theory of evolution by natural selection	LA1, LA6	Critical Thinking
Understand different types of selection	Analyzes different types of selection	Explains different types of selection	Recognizes different types of selection	Does not understand different types of selection	LA1, LA6	Critical Thinking