
SECTION HEADING

BIOL 1111: Principles of Biology II

Description

Principles of Biology II examines biological diversity and the basic mechanisms and concepts in organismal biology including a survey of life forms (viruses, bacteria, protists, fungi, plants and animals.) Additional topics will include taxonomy, classification, structure and function of the major groups of plants and animals. This course includes a lab.

Credits

4

Prerequisite

BIOL 1110

Corequisite

None

Topics to be Covered

1. Evolutionary relationships
2. Viruses
3. Bacteria
4. Protists
5. Fungi
6. Photosynthesis
7. Plant diversity, growth and development, nutrition and transport, and reproduction
8. Animal diversity, growth and development, nutrition, reproduction, and behavior
9. Ecology

Learning Outcomes

1. Compare and contrast the different domains and kingdoms of life by utilizing phylogenetic trees
2. Outline the relationships between structure and function of each of the groups of organisms (viruses, bacteria, protists, fungi, plants, and animals)
3. List and describe the features of viruses and bacteria.
4. List and describe the features of protists and fungi.
5. Examine and demonstrate knowledge of the processes of photosynthesis
6. Summarize plant diversity, growth, development, reproduction, and nutrition
7. Summarize animal diversity, growth, development, reproduction, nutrition, and behaviors
8. Identify ecological relationships between populations of organisms and their environment

Credit Details

Lecture: 3

Lab: 1

OJT: 0

MnTC Goal Area(s): Goal Area 03 - Natural Sciences

Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal Area 03: Natural Sciences

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.

Section Heading

3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.

4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.