

BIOL 1544 Principles of Biology I

Catalog Description: This course is an EAST/EMPACTS course. Students will work collaboratively to analyze a problem related to science and society. This course is open to motivated students who wish to gain a better understanding of the richness and complexity of scientific processes. BIOL 1544H includes the same course content as BIOL 1544.

Prerequisites: None

Credit hours/ Contact hours/ Load hours: 4/6/5

Target Audience/Transferability: A survey course intended for science majors and non-majors alike. BIOL 1544 meets the requirements for a laboratory science course for non-majors, and meets the needs of students seeking transferable credit toward completing a four-year degree, as well as pre-professional study for careers in health care, agriculture, and others.

Student Learning Outcomes: Students completing this course will:

- Demonstrate college-level knowledge of cell structure and function, and the chemistry of life.
- Demonstrate college-level knowledge of the inheritance of genetic traits, the relationship between genetics and evolution, and genetic technology.
- Describe the interdependence of organisms and their environment.
- Describe connections between course content and personal, community and global issues.
- Develop a hypothesis, gather and analyze data, draw conclusions, and present findings in a written form.

Topics:

- Scope & Science of Biology
- Chemistry of Life
- Cell Structure & Function
- Metabolism: Photosynthesis & Cellular Respiration
- Reproduction & Genetics
- DNA & Gene Activity
- Basics of Evolution
- Principles of Ecology

Forms of Assessment: Student writing should be an element of student learning. Lab reports should be used as part of grading.