

## **BIOL 1544H Principles of Biology I Honors**

**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.

**Honors Program Learning Outcomes:** Students who graduate from the NWACC Honors Program will become proficient in:

- Critical Thinking
  - Apply classroom learning to new problems and life situations
  - Analyze and evaluate evidence
  - Creatively develop original ideas and arguments
- Effective Communication
  - Express ideas and concepts precisely and persuasively in multiple formats
  - Effectively debate ideas and arguments in individual and group settings
- Community Engagement
  - Apply classroom knowledge to local or national issues
  - Serve the community through projects and presentations
  - Demonstrate responsible citizenship
- Valuing Diversity
  - Recognize and evaluate bias, stereotyping, and discrimination in human interaction
  - Respect cultural differences

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- Leadership
  - Formulate own leadership style through study of effective leadership methods
  - Develop skills in leading groups and projects
  - Use knowledge or education to influence others

**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.