

General Education Course Objectives and Learning Outcomes

Course Name: Essentials of Earth Science

Course Number: GEOL 1004

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Department: Physical Sciences

COMMON COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES THAT ARE OR WILL BE LISTED ON THE SYLLABUS OF EVERY SECTION OF THIS COURSE:

<i>Course objectives:</i>	<p>GEOL 1004 is introduction to the fundamental topics of earth science including physical and historical geology, oceanography, and meteorology. Laboratory exercises include the study of minerals, rocks, fossils, topographic and geologic maps, and oceanographic and meteorological phenomena. Laboratory work will stress the use of the scientific method of problem solving.</p>
<i>Student learning outcomes:</i>	<p>Upon satisfactory completion of the course, students will be able to:</p> <ul style="list-style-type: none"> - Demonstrate a fundamental understanding of the Earth’s geologic materials and processes, both internal and external. - Demonstrate an understanding of the role of the oceans on our planet; specifically by understanding the geological, chemical, physical and biological nature, processes and principles of the ocean. - Demonstrate an understanding of the principles and dynamic nature of the atmosphere. - Apply the scientific method to problem solving. - Develop an understanding of Earth science, and the relevance and connections of each branch of Earth science with contemporary issues such as global climate change.

ADHE ACTS INFORMATION FOR THIS COURSE (IF APPROPRIATE)

<i>ACTS Course number:</i>	PHSC 1104
<i>Copy the ACTS course objectives and learning outcomes:</i>	<p>General Description: Introduction to the basic concepts of Earth sciences. Lab required.</p> <p>Expected Student Learning Outcomes: The student will be able to explain, describe, discuss, recognize, and/or apply knowledge and understanding of the following topics:</p> <ul style="list-style-type: none"> • Earth structure and processes • Earthquakes, volcanism, glacial formations, plate tectonics, weathering, and erosion • Atmosphere, climate, and weather • Oceans • Rocks, minerals, and fossils • History of the Earth • Scientific method/inquiry

WHICH ATU GENERAL EDUCATION GOALS DOES THIS COURSE FULFILL? (NO MORE THAN TWO)

Communicate effectively

Written communication

Oral communication

X Think critically

Develop ethical perspectives

Diversity

Empathy

Leadership

X Apply scientific and quantitative reasoning

X Scientific reasoning

X Quantitative reasoning

Apply the value of the arts and humanities

Practice civic engagement

**DESCRIPTION OF HOW THIS COURSE MEETS THE GENERAL EDUCATION GOALS CHOSEN ABOVE
(TO BE INCLUDED ON THE SYLLABUS OF EVERY SECTION OF THIS COURSE)**

This course is designed to support two of the six goals of Arkansas Tech's general education requirements. These goals are to "*think critically*" and "*apply scientific and quantitative reasoning*". Classroom and laboratory lectures, exercises, and exams are specifically designed to assist the student in meeting these goals.