ES-Earth Science Courses

Courses

ES 101. Physical Geology. 3 Hours.
Earth-the third rock from the Sun. Mankind's only home with resources necessary for life. Learn about our uses and dependence on water, minerals, rocks, fossils and fossil fuels. Critical mineral resources that bind us to foreign countries. Dangers of earthquakes and volcanic eruptions. Our warming world in an energy transition for sustainability and reducing climate change. Active lectures with group discussions. This course, when taken with its corresponding laboratory ES102, meets the Blazer Core Curriculum Scientific Inquiry.

ES 102. Physical Geology Laboratory. 1 Hour.
Got gold? Probably not. Learn how to identify common rocks and minerals, and their uses in everyday materials. Lost your way? Learn how to read maps and the landscape. Feeling old? Learn about the geologic time scale, age of fossils, Earth and Moon. Wonder what powers your world? Learn about fossil fuels, electricity, and your future world of global climate change. One laboratory session per week. This course when taken with its corresponding lecture ES101 meets Blazer Core Curriculum Scientific Inquiry.
Prerequisites: ES 101 [Min Grade: D](Can be taken Concurrently)

ES 103. History of the Earth. 3 Hours.
Interpretation of Earths history through geologic time. Study of life on Earth through the fossil record. Lecture. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

ES 104. History of the Earth Laboratory. 1 Hour.
Sedimentary materials and environments of formation. Fossil identification. Geologic time and principles of age-dating. One laboratory session per week.

ES 105. Physical Geography. 3 Hours.
Atmosphere, weather, climate and climatic regions, and soils.

ES 107. Directed Readings in Earth Science. 1-3 Hour.

ES 108. Urban Geology. 3 Hours.
Urban lives are dominated by concrete and steel, as well as daily movements from home to campus or work. Every manufactured object is derived from earth's resources, and the planet's dynamic activity drives and constrains movements. This course will introduce students to the resources of the material world, e.g. minerals, rock, water, and the processes that impact the urban environment, e.g. flooding, weathering, etc. Students will learn, practice, and employ scientific thinking skills to better understand and analyze connections between geologic resources and economics, environment, and social justice. This course meets Blazer Core Curriculum City as a Classroom.

ES 109. Planet Earth. 3 Hours.
Major topics and problems in modern earth science. Nature of solid Earth and its atmosphere, climatic change, Earths resources, interaction of Earth with sun, and planetary geology. Selected readings and videotapes.

ES 110. The Geography of Alabama. 3 Hours.
The physical geography of Alabama: geologic setting, landscape, climate and weather, soils and vegetation, natural resources.

ES 120. Geology for Engineers. 3 Hours.
The solid earth, the nature of the earths crust, surficial processes.

ES 191. Co-op Work Program. 2-3 Hours.