

## **EARTH SCIENCE (EAS)**

### **EAS 110. Introduction to Environmental Science. 3 Credits.**

This is an introductory course to the interdisciplinary field of environmental studies. Emphasis in this course will focus on the natural world and how it is influenced by human activities. Topics discussed will include: biodiversity, conservation, human populations, resources and sustainability, energy production, toxicology, as well as global change. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Prerequisite: ENG 098, MAT 092 or MAT 096, RDG 098 or placement.

### **EAS 115. Paleontology: Evolution of Life. 4 Credits.**

In this course, students will be introduced to basic biologic principles of ecology and natural selection that have influenced the evolution of modern species. Examination of fossil and geologic records will illustrate how climate changes and major evolutionary developments over the earth's history have culminated in the domains and kingdoms of life. Students will also study what role humans are playing in the evolution and extinction of species today. Lab work will complement topics discussed during lectures. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Prerequisites: ENG 098, FYE 101, RDG 098, or placement.

### **EAS 120. Soil Science. 4 Credits.**

Soils are the anchors of biological systems. This is a study of the physical, chemical, and biological nature of the soil. This four-credit laboratory course will study the substrate of the ecosystem. Emphasis will be placed on the role of the soil in plant pathology. Lab sessions will be hands-on experiences revolving around and applying the topics listed in the lab section of the syllabus. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Formerly offered as BIO 220. Prerequisites: ENG 098, FYE 101, MAT 092 or MAT 096, RDG 098 or placement. Fall.

### **EAS 125. Physical Geology of the Earth. 4 Credits.**

This is an introductory course concerning the geology of both the earth's interior and surface. The geology of the earth's interior deals with its structure, the rock cycle, the formation and characteristic of igneous sedimentary and metamorphic rocks, as well as their mineral composition. The theory of plate tectonics will be used to discuss earthquakes, volcanoes, and mountain building. Surface geology encompasses soil and its formation, rivers, lakes, deserts, glaciers, topographic maps, and oceans. The process of physical and chemical weathering will be discussed in relation to these topics. Laboratory sessions will involve hands on experience with rocks, minerals, and measuring techniques used in geology, as well as online exercises. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Prerequisites: ENG 098, FYE 101, RDG 098, MAT 092 or MAT 096 or placement.

### **EAS 126. Weather and Climate. 4 Credits.**

This is a 4-credit on-line laboratory science course. This course describes the basic structure of the atmosphere, and atmospheric processes. Students will develop an understanding of meteorological principles and concepts in order to understand the weather phenomena that affect our daily lives. Climate and the distinction between climate and weather will also be discussed. Prerequisite: ENG 098, MAT 092 or MAT 096, RDG 098 or placement.

### **EAS 127. Introduction to Astronomy. 3 Credits.**

This course is a general introduction to the field of astronomy. Students will study topics such as telescopes, the history of astronomy, tides and the moon, the planets of our solar system, properties of stars, our sun, solar formation and evolution, as well as galaxies. Students will be expected to make astronomical observations from their homes, as well as collect relevant data from the internet. Prerequisite: ENG 098, RDG 098, MAT 092 or MAT 096 or placement.

### **EAS 130. Fundamentals of Geospatial Technologies. 4 Credits.**

This course introduces students to relevant aspects of geospatial technologies. Topics to be covered include mapping techniques, the theory and application of Geospatial Data and GPS, Geographic Information Systems, Remote Sensing, and Geospatial Applications. Students will gain hands-on experience with geospatial software such as Google Earth, ArcGIS Online, ArcGIS Pro and other applications to establish a basic understanding and the skills needed in the broad field of Natural Resources as well as other related disciplines. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Prerequisites: ENG 098, MAT 092 or MAT 096, RDG 098 or placement. Fall.