

EARTH SCIENCE (ESC)

ESC 100 - Rocks and Minerals Survey (3 Credits)

3 lecture, 0 lab, 3 total contact hours

Provides a survey of earth materials, their origins, chemistry, structure, identification, classification and uses, with an emphasis on minerals and rocks used in everyday life, and their impact on health and the environment. Knowledge of high school algebra is assumed. IAI P1 907

Typically offered: Spring

ESC 101 - Earth Science Survey (3 Credits)

3 lecture, 0 lab, 3 total contact hours

Designed to give the non-science major an understanding and appreciation of basic concepts in geology, atmospheric science and astronomy. IAI P9 900 Prerequisite: Placement into college-level mathematics without support. <https://www.harpercollege.edu/testing/mathplacement.php>

Typically offered: Fall

ESC 110 - Exploring the Earth and Universe (4 Credits)

3 lecture, 2 lab, 5 total contact hours

Examines topics in geology including rocks, minerals, plate tectonics and geologic time; meteorology including atmospheric science, severe weather and atmospheric dynamics; astronomy including the origins of modern astronomy, introduction to planetary science and cosmology. IAI P1 905L Prerequisite: Placement into college-level mathematics without support. <https://www.harpercollege.edu/testing/mathplacement.php>

Typically offered: Fall

ESC 111 - Physical Geology (4 Credits)

3 lecture, 2 lab, 5 total contact hours

Provides an introduction to the earth's minerals, rocks and natural resources and the processes which have shaped the Earth's surface such as sedimentation, mountain building, and action of water, wind, ice and downslope movements. Covers Earth's fundamental structure and the behavior of Earth materials. Focuses on the roles of volcanism, earthquakes, sea-floor spreading and paleomagnetism in explaining plate tectonic theory. Knowledge of high school algebra is assumed. IAI P1 907L

Typically offered: Fall, Spring, Summer

ESC 112 - Dinosaurs, Fossils and Planet Earth (4 Credits)

3 lecture, 2 lab, 5 total contact hours

Includes basic principles of historical geology, rocks and minerals, plate tectonics, geologic time, reading the fossil record, the evolution of Earth through time, evolution of life through time, and the geologic story of the North American continent. Knowledge of high school algebra is assumed. IAI P1 907L

Typically offered: Fall, Spring, Summer

ESC 113 - Environmental Geology (4 Credits)

3 lecture, 2 lab, 5 total contact hours

Examines the relationships between humans and the geological environment. Includes the study of use and abuse of natural resources such as water, minerals, and energy; an overview of natural hazards; an examination of urban geology and land management issues and the relationship between community status and land use; an analysis of pollution and waste disposal; and an introduction to climate change and global warming. Emphasis on issues and practices in the Chicagoland area. Knowledge of high school algebra is assumed. IAI P1 908L

Typically offered: Fall, Spring

ESC 121 - Introduction to Meteorology (4 Credits)

3 lecture, 2 lab, 5 total contact hours

Gives the non-science major an understanding and appreciation of the composition and structure of the atmosphere, thermodynamic processes, forces and related small- and large-scale motions, air masses, fronts, tropical cyclones, solar and terrestrial radiation, severe weather, basic weather forecasting techniques, and general circulations that affect the atmosphere. IAI P1 905L Prerequisite: Placement into college-level mathematics without support. <https://www.harpercollege.edu/testing/mathplacement.php>

Typically offered: Spring