



After Graduation

Upon graduation students have a wide range of career opportunities. They can enter the petroleum industry with the exploration and production of oil & gas.

They can also work in the vast area of [geotechnical engineering](#), along with the [hydrogeology domain](#) or [groundwater exploration](#). [Quarrying, mining, and geological research](#) represent other areas of employment.

To learn more about the Geology & Petroleum Studies Department:

Web www.aub.edu.lb/fas/geology

Email arahman@aub.edu.lb



GEOLOGY & PETROLEUM STUDIES

Undergraduate Program

Natural Sciences

Geology is the science that deals with the study of the Earth and the planets; past, present and future.

It covers a very wide spectrum, from ionic structures of micro-crystals to the origin of the solar system. The discipline involves the study of evolution and extinction of the dinosaurs, the discovery and exploration of oil and gas mineral deposits, and gemstones.

Faculty of Arts and Sciences

Tel +961 1 343 002

Fax +961 1 744 460

Web www.aub.edu.lb/fas

Email fas@aub.edu.lb

Sample Courses

GEOL 202

Historical Geology

An introduction to Earth's history, including the principles of interpreting the past, origin and evolution of life on Earth.

GEOL 211

Crystallography & Mineralogy

An introduction to the laws that govern formation of crystals and the study of the various mineral groups, their chemistry, classification and identification.

GEOL 201

Physical Geology

Surveys minerals, rock types, volcanoes, earthquakes, plate tectonics, external earth processes of groundwater, streams, wind (deserts) and glaciers.

Geologists main tasks include exploration, development and production of petroleum, natural gas, mineral deposits, and groundwater. They record events that took place in the past, such as how the continents moved, how mountains formed, and how life began and developed throughout the geologic eras. Geologists are also interested in the Earth as it will be in the future.



Investigating the different internal processes that shape the **Earth, build the mountains, move segments of the Earth's crust, and produce earthquakes & explosive volcanoes.** In addition, Geologists study external processes, such as weathering and erosion, that continuously re-shape the landscape.

Curriculum

The curriculum's aim is to prepare our students to fulfill the needs in terms of geological mapping, and the exploration for mineral, petroleum, as well as groundwater resources. Students then learn how to focus on topics related to the world economy and environmental implications.

Courses are carried out in small group settings in which students receive individual attention. Students gain indepth critical knowledge and learn modern theories that govern the **dynamics of the Earth, as well as Earth's natural resources.** They also learn techniques applied to the identification and exploration of such resources.

Throughout their three years, students are first introduced to the **basic theories of geology, mineralogy, petrology, sedimentology, and structural geology.** Students also focus on complex theories such as crystal lattice structures and global tectonic phenomena.

In the Petroleum Studies major, and besides the main technical geology courses, students are also required to successfully complete courses in other domains including **organic chemistry, computer science, economics, management, and marketing.**

In addition to class courses, students are expected to complete field work assignments, as well as a major individual field work project normally given in their final year. During their time in laboratories and in the mountains, students are able to gain practical knowledge and hands on training on **basic geological mapping, structural analysis, interpretation of stratigraphic sections and depositional environments.**

Student Activities

Students within the Geology Department form the **Geology Student Society.** The society is run by a student cabinet, elected annually by fellow students, and they organize activities such as outings, outdoor sports activities, and social events both inside and outside AUB that commonly include students & staff.



GEOL 224

Regional Geology

Studying the geology of the Middle East regions, with emphasis on its stratigraphy, geological evolution, and petroleum resources.

GEOL 205

Earth Resources and Energy

A study of the main economic mineral resources and traditional & alternate energy resources with an emphasis on the environmental impacts of their use and misuse.

GEOL 213

Structural Geology

The study of rock deformation, classification and interpretation of primary and secondary geological structures, and their significance to regional and global tectonics.

GEOL 225

Petroleum Geology

A course on the hydrocarbon formation and occurrence of oil and gas fields as well as exploration and extraction methods.