



## KING ABDULAZIZ UNIVERSITY FACULTY OF EARTH SCIENCES



### INTRODUCTION

The Faculty of Earth Sciences (FES) is one of the oldest educational institutions in the Kingdom of Saudi Arabia. It was established in 1970 A.D. / 1390 A.H.

The FES consists of six (6) specialized departments dealing with the various disciplines of the earth sciences. These departments are as follows:

1. Department of Mineral Resources and Rocks
2. Department of Hydrogeology
3. Department of Engineering and Environmental Geology
4. Department of Petroleum Geology and Sedimentology
5. Department of Structural Geology and Remote Sensing
6. Department of Geophysics

Moreover, there is a Technical Training Department that offers a Technical diploma in Earth Science in the following options: General Geology, Geochemistry, Geophysics, Engineering Geology, Surveying and Drafting.

### FACULTY OBJECTIVES

The FES intends to participate in the scientific and cultural development of the Kingdom of Saudi Arabia by executing the following tasks:

- The preparation of specialized personnel in the earth sciences fields at the levels of undergraduate (B.Sc.) and graduate (M. Sc. and Ph. D.).
- Supervising and conducting several knowledge-based scientific and training courses in different fields of earth sciences specially geohazards and environmental to promote and update the knowledge of personnel working in the Ministries, agencies and educational institutions.
- Support and execution of academic and applied research projects to explore and develop the mineral and groundwater resources in the Kingdom of Saudi Arabia and offering scientific and technical consultancy for different industrial agencies.
- Participation in promoting the public awareness particularly with regard to the geohazards, environmental pollution and conservation of national natural resources.
- Encouraging Arabic publications and translations of textbooks in different fields of the earth sciences.

### FACULTY DEPARTMENTS

#### 1- Department of Mineral Resources and Rocks

The department offers courses that help to develop the academic and applied aspects of the various fields of mineral resources and rocks such as study of mineral deposits, evaluation, mining methodologies, feasibility, etc. The departmental laboratories are equipped with modern state-of-the art instruments for chemical analyses and study of rock and mineral samples.

#### 2. Department of Hydrogeology

The department provides the basic knowledge of the ground water quality and the affects of the aquifer rocks, ground water exploration techniques and development of ground water resources of the Kingdom of Saudi Arabia.

#### 3. Department of Engineering and Environmental Geology

The department offers courses dealing with the engineering properties of the rocks, soil and concrete;

site investigations to evaluate geologic characteristics and suitability of site for construction work; assessment of geologic and environmental hazards and mitigation and the study of national and international building codes and environmental specifications.

#### 4- Department of Petroleum Geology and Sedimentology

The department provides the theoretical and practical aspects related to the formation of petroleum, methods of petroleum prospection and exploration, technology development and application of computer in petroleum geology. Moreover, the department offers the basic knowledge of sedimentary rocks, their types, classification, depositional environment and study of fossils that found in them.

#### 5- Department of Structural Geology and Remote Sensing

The department offers courses dealing with the geologic structures within the Earth's crust, their direction analyses, degree of deformation and to introduce the main tectonic framework. The remote sensing, on the other hand, deals with the satellite images to construct regional maps using different techniques.

#### 6- Department of Geophysics

The department provides the basic geophysical knowledge concerning the Earth using the physical properties of the material forming it, as well as information about the tectonic processes within the shallow and deep parts of the Earth. Methods of mineral resources and petroleum exploration, geologic hazards such as earthquakes, as well as computer application in geophysics are also offered.

### JOB OPPORTUNITIES

The FES qualifies graduates to work in the following field:

- Saudi Geological Survey
- Saudi Aramco
- Companies of Petroleum, Mineral prospection and exploration, Mining, Stone Quarry and Building Materials.
- Ministry of Petroleum and Mineral Resources
- Companies for Geological, Geochemical and Geophysical Exploration

- Companies for Building Construction and Engineering Foundation
- Department of Military Survey
- General Presidency for Meteorology and Environment Protection
- Research Institutions within King Abdulaziz City for Science and Technology
- Ministry of Water and Electricity
- Ministry of Education
- Ministry of Transportation
- Ministry of Municipal and Rural Affairs
- Ministry of Agriculture
- Ministry of Higher Education

### BENEFITS OF THE STUDY IN FES

The studying programs in the Faculty of Earth Science cover both of theoretical and applicable aspects, where undergraduate study some courses during field trips in different specialization.

### DEGREES OFFERED

The FES offers *B.Sc.*, *M. Sc.* and *Ph.D.* degrees in different specialization of Earth Sciences. Moreover, the departments offer *M. Sc.* without thesis in some specialization. Moreover, a two years Diploma Programs will be offered by Department of Technical Training.

### COMMUNITY SERVICES

FES is interested in participating the Community by active cooperation with the Public and Private sectors in the fields of research and consultation. Moreover, FES offers specialized courses for different sectors.

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[www.kaau.edu.sa/fes/index.html](http://www.kaau.edu.sa/fes/index.html)