قسم الجيولوجيا البلدي والإستعمار عن بعد

بالنظر إلى النتائج التي تبدو على الصورة، فإن الخريطة الجيولوجية تبين أن الهدف من مبادرة هذا المشروع هو تحليل وتوفير المعلومات الجيولوجية للمناطق الريفية.

الأنشطة البحثية

- بحث حول توزيع الأحجار الكوارتزية في المنطقة.
- تحليل نتائج الصور الجوية لتحديد المناطق ذات الاهتمام الجيولوجي.
- تحليل البيانات الميدانية والجوية للمساعدة في تحديد الأماكن ذات الصلة.
- تطوير تقنيات التحليل الجيولوجي المستخدمة في المشاريع الحالية.

برامج الدراسات العليا

- الدكتوراه في الجيولوجيا بلدية.
- الماجستير في الجيولوجيا بلدية.
- البكالوريوس في الجيولوجيا.

برامج الدراسات التطبيقية

- تدريب الطلاب في مجال الجيولوجيا العراقية.
- تطوير برامج تدريبية للعاملين الجيولوجيين في الحكومة.
- تنظيم المؤتمرات والورش التدريبية في مجال الجيولوجيا.

المصدر: جامعة الملك عبد العزيز
كلية علوم الأرض

رابط الموقع الإلكتروني: www.kau.edu.sa
The department of "Structural Geology" has been established in 1978 H as one of the Faculty of Earth Sciences departments. Because of amazing evolution in the fields of Remote Sensing and Geospatial Information Systems, and owing to the intimate relation of the Structural Geology with these tools, the department was renamed as "Department of Structural Geology and Remote Sensing".

Objectives:
The "Department of Structural Geology and Remote Sensing" has two fields: (1) structural geology and (2) remote sensing and GIS. The following are the main objectives of the department:

- Qualifying the Earth Sciences students in the fields of structural geology, field structural mapping and aerial photogrammetry.
- Application of Remote Sensing, GIS and Aerial Photogrammetry techniques in the construction of geologic maps and mineral exploration, together with the studying the attitudes of active tectonic fabric elements.
- Construction of Geospatial database of different geologic and tectonic features to use in sustainable development and also in the study of environmental hazards.

Degrees Offered

- B.Sc.
- M.Sc.
- Ph.D.

Undergraduate Program

Within the frame of the general regulations for undergraduate program applied in the KAU, a student will be awarded the B.Sc. degree after a successful completion of 136 course units, distributed over eight semesters, and including compulsory courses required by the University, the Faculty and the Department. The later consists of 62 course units that include the following:

- Analysis of directional data
- Analysis of map data
- Introduction to photogrammetry
- Geologic surveying
- Fracture analysis
- Principles of remote sensing
- Computer processing of satellite data
- Photogeology
- Geologic data processing
- Field training
- Petroleum geology
- Geostatistics
- Introduction to hydrogeology
- Geology of mineral deposits

Postgraduate Program

The postgraduate program provides an opportunity for the student to get familiar with advanced methods and modern techniques in structural geology, geologic mapping, remote sensing and geospatial information systems. All of these techniques are very necessary in the study of mineral resources, underground water and oil, and in the assessment of natural and environmental hazards.

The study units required in postgraduate program (including thesis) are:

- M. Sc. With thesis 34 study units
- Ph. D. 40 study units

Some of the Postgraduate Program courses are listed below:

- Advanced field training
- Petrofabrics
- Analysis of polyphase deformation
- Advanced geotectonic
- Geologic applications of space technology
- Integration and analysis of remotely sensed data

Laboratories and Facilities

The following Laboratories and facilities are offered in the department:

- Remote Sensing Lab.
- Photogrammetry Lab.
- Aerial Photos and Satellite Imagery Production Lab.
- Personal Computer Lab.
- Field Camping and field structural mapping equipments

Current Research Activities

The following topics are examples of the research activities carried out in the department:

- Geologic and structural mapping of vast areas in the Kingdom.
- Studying the tectonic evolution of the Arabian Shield.
- Studying the active structural fabrics and its impact on urban areas.
- Monitoring coastal areas subsidence and rise due to the influence of tectonic movements.
- Application of Remote Sensing and GIS techniques in studying underground water, mineral resources, flood hazards, and sewage hazard on Jeddah.