Course Information

- Course name and number: Hydrogeology of the Kingdom – EHG 413
- Course meeting times, places: Sun. Tue.-12-15.50
- Course website address: www.kau.edu.sa\bayumi
- Course prerequisites: EHG399, EMR431

Description of the Course

This course aims at giving the student an idea about the sources of water in the kingdom, their quantities, qualities, usage, reserves and rates of recharge. This will help the students in their future carriers.

Course Objectives

1- Introducing students to the different types of water resources in the kingdom.
2- Giving the students information about the government offices in charge of the water administration and projects in the country.
3- Organizing field trips to offices of water authorities and location of water projects in the area.

Course Outcome

The student is expected to know the hydrogeology of the Kingdom. He will learn the following:
1. Student can be able to know the natural water resources aquifer.
2. Student can perform water studies and projects in the water section.
3. Student can be familiar with the national plan for water in the Kingdom.

Course requests and means of evaluation:
1- 4 periodical exams- 10 degrees each
2- Term paper -20 degrees.
3- Final exam - 40 degrees.
• **Learning Resources**

**General References for the Course:** (Books/Journals…etc.)

Students in this course can read from:

**A- English References:**


**B- Arabic References:**

1- الماء ومسيرة التنمية في المملكة العربية السعودية مصطفى نوري عثمان مكتبة تهامة (١٤٠٤هـ)
2- سبع سنابل خضرة وزارة الزراعة والمياه (١٩٦٠م)
3- الجغرافيا الطبيعية للمملكة العربية السعودية د/ عبد الحفيظ سقا الناهار: المؤلف (١٤١٩)
4- أطلس المياه بالمملكة العربية السعودية وزارة الزراعة والمياه د/ عبدالعزيز البسام
5- المياه الجوفية

**List of URLs for this Course:**

- [http://www.saudiaramcoworld.com/index/Subjects.aspx#DAMS](http://www.saudiaramcoworld.com/index/Subjects.aspx#DAMS)
Contents

1- Introduction
2- Location and area of the Kingdom of Saudi Arabia
3- Geography and topography of the Kingdom of Saudi Arabia
4- General Geology of the Kingdom of Saudi Arabia
5- Sources of water in the Kingdom of Saudi Arabia
6- Dams in the Kingdom of Saudi Arabia
7- Researches and projects in the Kingdom of Saudi Arabia
8- National plan for water in the Kingdom of Saudi Arabia

HYDROGEOLOGY OF THE KINGDOM (EHG 413)

Course Schedule for EHG 413
(meeting twice a week)

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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| 1    | Introduction  
Location & Area of the Kingdom |
| 2    | Hydrology of Saudi Arabia |
| 3    | Geology of Saudi Arabia  
Water Resources in Saudi Arabia |
| 4    | Hydrogeological Classification of Sedimentary Aquifer and Their Characters |
| 5    | Major Aquifers |
| 6    | Major Aquifers (continued) |
| 7    | Aquifers in Volcanic Rocks  
Secondary Aquifers |
| 8    | Secondary Aquifers (continued) |
| 9    | Desalination  
Dams Projects in Saudi Arabia |
| 10   | Waste — Water Treatment  
Water Studies & Project |
| 11   | National Plan for Water in the Kingdom |
| 12   | Water Projects in Some Regions |
| 13   | Water Problems  
Case Studies |
| 14   | Case Studies (continued) |
| 15   | Revision |
| 16   | Final Exam |