Faculty of Engineering & Technology

Engineering Geology

Information :

Course Code :	SCM 313	**Level :**	Undergraduate	**Course Hours :**	2.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Associate Professor	Ahmed Mohamed Abd Elkhaleq Ebid	2
Assistant Lecturer	MUHAMMAD DIAB SAAD ELDIN ABDLAAL	2
Assistant Lecturer	Ahmed Mohamed Abdel Moniem Mohamed Soliman	22

Area Of Study :

ÅUnderstand fundamentals of earth formation
ÅComprehend the fundamental principles of rock mechanics for the solution of practical Engineering problems and ability to recognize types of rock, joints and discontinuities.
ÅIdentify the fundamental geological features and various problems associated with the rock formations
ÅExplore the fundamental definitions of soil properties
ÅDevelop skills for analyzing experimental data and working in teams
ÅShare ideas and work in a team.

Description :

Engineering classification and properties of minerals and rocks, Nature and properties of the earthôs crust, Faults, folds, joints and joint systems, Earthquakes : centre, waves, the centre of the earth, Geologic map of Egypt, Building materials, Concrete materials (aggregates and cement), Geophysics applied in civil engineering, Ground water : distribution G.W, motion of G.W., G.W. Level ,G.W. Pollution ,Problems related to extraction of G.W., Weathering problems ,Field visits to geologic sites.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Explain the fundamentals of rock cycle
2 -	Define the geological properties of different rock types (Petrography).
3 -	Classify the various engineering properties of rocks
4 -	Identify the main laboratory testing on intact rocks and interpret of the test results.
5 -	Representing stress state of rock in Mohr circle
6 -	Define the main and basic definitions of soil properties
b.Intellectual Skills: :	
1 -	Ability to define and solve problems
2 -	Ability to analyze experimental data

c.Professional and Practical Skills: :	
1 -	Using of laboratory devices
2 -	Writing technical reports
d.General and Transferable Skills: :	
1 -	Ability to work in a team
2 -	Ability to share ideas and communicate with others
3 -	Ability to deal with others according to the rules of the professional Ethics

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Formation of Earth	2	2	1
Rock Cycle and types of Rocks	8	8	8
Geological features	2	4	4
Engineering properties of Rocks, laboratory testing of rocks, normal, shear stresses and Mohr circle.	8	8	8
Soil Formation and different soil deposits	4	4	4
Basic properties of soil and basic definitions	4	4	4

Teaching And Learning Methodologies :

Lectures

Tutorials

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
First Mid Term Exam	25.00		
Performance	10.00		
Second Mid Term Exam	25.00		

Course Notes :

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Recommended books :

-" Alam Singh "Basic soil mechanics and foundations", 2004"

Periodicals :

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Web Sites :

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