

Faculty of Engineering & Technology

Soil Mechanics

Information :

Course Code : SCM 441 **Level :** Undergraduate **Course Hours :** 4.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Associate Professor	Ahmed Mohamed Abd Elkhaleq Ebid	18
Assistant Lecturer	MUHAMMAD DIAB SAAD ELDIN ABDLAAL	16
Assistant Lecturer	Ahmed Mohamed Abdel Moniem Mohamed Soliman	

Area Of Study :

Upon successful completion of this course, the student should be able to:

- Understand the basic concepts and main principles
- Calculate the values of the essential terms
- Apply Codes provisions
- Carry out the related tests

Regarding soil compaction permeability & seepage stresses distribution soil compressibility & settlement consolidation shear strength of soil slope stability

Description :

Main properties of soil, Soil classification, Soil compaction, Permeability, stresses distribution in soil, Compressibility of soil, Theory of consolidation, shear strength of soil, Lateral earth pressure, Bearing capacity of soil.

Course outcomes :

a. Knowledge and Understanding: :

1 -	a1- Define the main terms of soil compaction
2 -	a2- Explain the principals of permeability & seepage
3 -	a3- Describe the main concept of consolidation
4 -	a4- Explain the principals of slope stability

b. Intellectual Skills: :

1 -	b1- Calculate the values of soil compaction
2 -	b2- Calculate the values of permeability & seepage
3 -	b3- Solve problems regarding stresses distribution soil
4 -	b4- Calculate the values of compressibility & settlement
5 -	b5- Calculate the values of consolidation
6 -	b6- Calculate the values of shear strength of soil
7 -	b7- Calculate the values of slope stability

c. Professional and Practical Skills: :

1 -	c1- Proceed test steps of the soil compaction
2 -	c2- Proceed test steps of the permeability & seepage
3 -	c3- Proceed test steps of the consolidation
4 -	c4- Prepare technical reports for shear strength of soil

d. General and Transferable Skills: :

1 -	d1- Work under stress
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Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Permeability and seepage flow	10	6	4
Soil compaction and soil improvement	5	3	2
Stress Distribution	10	6	4
compressibility & settlement	10	6	4
consolidation	10	6	4
shear strength of soil	15	9	6
slope stability	10	6	4
Revision	5	3	2

Teaching And Learning Methodologies :

Interactive Lec.
Discussion
Problem Solving
Lab Exper.
Report / Present.

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
Lab Exper	10.00		
Mid- Exam I, II	30.00		
Quizzes / Assig	10.00		
Report / Present	10.00		

Course Notes :

-Lecture Notes on Moodle

Recommended books :

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Periodicals :

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Web Sites :

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