

Soil Mechanics II

Course Description Form

1. Course Name:	
Soil Mechanics II	
2. Course Code:	
Civ32201	
3. Semester / Year:	
Second semester / Third year	
4. Description Preparation Date:	
1 st September 2025	
5. Available Attendance Forms:	
Weekly (Lect :90 hr and Lab: 30 hr)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Lecture :90 hours Lab: 30 hours Total: 90 hours ECTS: 4	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Lubna Abdulrahman Khdier Email: lubna.abddulrahman@muc.edu.iq	
8. Course Objectives	
Course Objectives	1. Understand the stress-strain relationships in soils under drained and undrained conditions. 2. Examine the behavior of pore water pressure in undrained soil conditions. 3. Analyze the consolidation process and its effects on settlement in soil structures. 4. Study the shear strength of soils and its application in geotechnical design. 5. Develop an understanding of soil mechanics for both short-term (undrained) and long-term (drained) conditions.
9. Teaching and Learning Strategies	
Strategy	To provide students with a thorough understanding of soil behavior under various loading conditions, enabling them to apply these concepts in geotechnical design and problem-solving, focusing on stress-strain behavior, consolidation, and shear strength
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	Th.:3 Pr.: 2	Describe stress-strain relationships for soils under different drainage conditions	Stress- Strain Relation	Lect. & Lab.	Homework
2.	Th.:3 Pr.: 2		Stress- Strain Relation	Lect. & Lab.	Classwork
3.	Th.:3 Pr.: 2		Stress- Strain Relation	Lect. & Lab.	Homework
4.	Th.:3 Pr.: 2	Analyze undrained pore water pressure and its implications in soil stability.	Undrained Pore Water Pressure	Lect. & Lab.	Quiz
5.	Th.:3 Pr.: 2		Undrained Pore Water Pressure	Lect. & Lab.	Classwork
6.	Th.:3 Pr.: 2	Evaluate consolidation processes and calculate soil settlement.	Consolidation and Settlement	Lect. & Lab.	Homework
7.	Th.:3 Pr.: 2		Consolidation and Settlement	Lect. & Lab.	Classwork
8.	Th.:3 Pr.: 2		Consolidation and Settlement	Lect. & Lab.	Quiz
9.	Th.:3 Pr.: 2	Determine shear strength parameters and apply them in geotechnical	Shear Strength	Lect. & Lab.	Quiz
10.	Th.:3 Pr.: 2		Shear Strength	Lect. & Lab.	Classwork
11.	Th.:3 Pr.: 2	Mid-exam		Lect. & Lab.	Exam
12.	Th.:3 Pr.: 2	Differentiate between drained and undrained soil behavior and assess their stress-strain relationships.	Stress-Strain Relationship for Drained and Undrained Soil	Lect. & Lab.	Homework
13.	Th.:3 Pr.: 2			Lect. & Lab.	Quiz
14.	Th.:3 Pr.: 2			Lect. & Lab.	Classwork
15.	Th.:3 Pr.: 2	Preparation for the final examination	-	-	-

16. Course Evaluation

The grade distribution is as follows:

Assessment: Formative 40 marks, monthly exam 10 marks

Final exam: Theory 50 marks

17. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Principles of geotechnical engineering Das, Braja M
Main references (sources)	Soil Mechanics T. William Lambe , Robert V. Whitman

Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	