Jordan University of Science and Technology

Faculty of Engineering

Civil Engineering Department

CE762 Soil Behavior - JNQF Level: 9
First Semester 2022-2023

Course Catalog
3 Credit Hours. Permeability and seepage, consolidation theory, secondary compression, three dimensional consolidation, settlement analysis, stress-strain-strength behavior of soils: drained and undrained conditions for cohesive and cohesionless soils, anisotropy of soils, classes of stability.
Teaching Method: On Campus

Text Book	
Title	Advanced Soil Mechanics
Author(s)	Braja M. Das
Edition	5th Edition
Short Name	1
Other Information	CRC Press

Course References

Short name	Book name	Author(s)	Edition	Other Information
2	Class Notes and Assignments	Class Notes and Assignments	1st Edition	

Instructor	
Name	**Dr. Samer Rababah**
Office Location	C2 L-1
Office Hours	Sun : 10:30 - 11:30 Mon : 09:00 - 11:00 Tue : 10:30 - 11:30 Thu : 10:30 - 12:30
Email	srrababah@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Tue : 11:30 - 13:00 Room: C2010

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Overview of soil mechanics	From **1**, From **2**
Week 2	Permeability and Seepage	From **1**
Week 3	Effective Stress and Pore Pressure	From **1**, From **2**
Weeks 4, 5, 6	Consolidation Theory	From **1**, From **2**
Weeks 7, 8	Stress-Strain-Strength Behavior of Soils	
Week 9	Settlement Analysis	From **1**
Week 10	Stress Paths and Critical State Soil Mechanics	From **1**, From **2**
Weeks 11, 12, 13	Advanced Shear Strength Concepts	From **1**, From **2**
Weeks 14, 15	Advanced Settlement under Dynamic Loading	
Week 16	Course Review and Case Studies	From **2**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Identify and Analyze Soil Permeability and Seepage [1L9K1]	20%	
Apply Consolidation Theory to Settlement Problems [1L9K2, 1L9S2]	20%	
Evaluate Stress-Strain-Strength Behavior of Soils [1L9S2]	15%	
Apply concepts of anisotropic behavior in geotechnical problem-solving. [1L9K1]	15%	
Perform Comprehensive Stability and Settlement Analyses [1L9K3]	20%	
Develop Advanced Problem-Solving Skills in Soil Mechanics [1L9C5]	10%	

Relationship to NQF Outcomes (Out of 100%)				
L9K1	L9K2	L9K3	L9S2	L9C5
35	10	20	25	10

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