



**Jordan University of Science and Technology**  
**Faculty of Engineering**  
**Civil Engineering Department**

CE463 Geotechnical Engineering Lab - JNQF Level: 7

First Semester 2023-2024

**Course Catalog**

1 Credit Hours. 1 Credit hours (2 h labs). This laboratory course is designed to provide insight and experience into Soil Description and Identification, Moisture Content, Sieves and Hydrometer Analysis; Atterberg Limits (Liquid, Plastic and Shrinkage Limits); Compaction; Permeability tests (constant and falling head); Consolidation; Direct Shear; Unconfined Compression test; Triaxial Compression test.

**Text Book**

<b>Title</b>	Soil Mechanics Laboratory Manual.
<b>Author(s)</b>	Braja M. Das
<b>Edition</b>	6th Edition
<b>Short Name</b>	Ref#1
<b>Other Information</b>	

**Instructor**

<b>Name</b>	<b>Miss Mysa AlKhasoneh</b>
<b>Office Location</b>	-
<b>Office Hours</b>	Sun : 12:30 - 14:30 Mon : 12:00 - 13:00 Tue : 12:30 - 14:30 Wed : 12:00 - 13:00
<b>Email</b>	makhassawneh@just.edu.jo

**Class Schedule & Room**

Section 1:

Lecture Time: Sun : 14:30 - 17:30

Room: LAB

Section 2:

Lecture Time: Tue : 14:30 - 17:30

Room: LAB

**Prerequisites**

Line Number	Course Name	Prerequisite Type
234620	CE462 Geotechnical Engineering	Pre./Con.

**Tentative List of Topics Covered**

Weeks	Topic	References
Week 1	Introduction and Report Writing	
Week 2	Determination of Moisture Content and specific gravity	
Week 3	Sieve Analysis	
Week 4	Hydrometer Analysis	
Week 5	Atterberg Limits ( Liquid and Plastic Limit)	
Week 6	Standard Proctor Test	
Week 7	Field Density ( Using Sand Cone Method)	
Week 8	Permeability Test ( Constant and Falling Head Test)	
Week 9	Unconfined Compression Test and triaxial test	
Week 10	Consolidation Test	
Week 11	Direct Shear Test on sand	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Learn how to measure the basic properties of soils [1SO1] [1L7K1]	25%	
Learn how to use soil properties in Geotechnical designs. [1SO1] [1L7K1]	25%	
Be able to run sum of the field tests. [1SO7] [1L7S3]	25%	
Be able to measure the shear strength of soil. [1SO1] [1L7S2]	25%	

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
75						25

Relationship to NQF Outcomes (Out of 100%)		
L7K1	L7S2	L7S3
50	25	25

Policy	
policy #1	The main objective of a Laboratory course to furnish the student with basic understanding of objectives of different tests. Teach the student the method of testing and ensure that he/she can carry out the test him/herself in the future

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