The Hashemite University
Faculty of Engineering
Civil Engineering Program
Course Syllabus

Course Title:	Geotechnical Engineering	**Course Number:**	1804011336
Department:	Civil Engineering	**Designation:**	Compulsory
Prerequisite(s):	1804011231		
Instructor:	Hussien al-deeky	**Instructor's Office:**	E 3001
Instructor's e-mail:	aldeeky@hu.edu.jo		
Time: Sun, tues, Thu (1-2)		**Class Room:** E2030	

Course description: Index and classification of soils, water flow in soils (one and two dimensional water flow), soil stresses, soil compaction, distribution of stresses in soil due to external loads, consolidation and consolidation settlement, shear strength of soils.

Textbook(s): Braja M Das and Khaled, Principle of Geotechnical Engineering, 12th edition, I edition. Cengage learning, Stamford, CT06902, USA.

Rererences: R.F. Craig, Soil Mechanics, Spon Press, 2004.
Holitz, R.D and Kovacs, W.D. An Introduction to Geotechnical Engineering, prentice Hall.

Topics Covered:

Topics	# Weekss	Contact hours*	
Introduction to geotechnical engineering	1	3	**First Exam**
formation of soils and mineralogy of soil solids as geotechnical materials	1	3	
index properties and classification of soils	1	3	
soil compaction	2	6	
water in Soils (permeability)	2	6	**Second Exam**
seepage	2	6	
soil effective stresses	1	3	
stress distribution in soils due to external loading	1	3	
soil consolidation (consolidation settlement, and Rate of consolidation),	2	6	
shear strength of soils	2	6	
Total	**15**	**45**	

Specific Outcomes of Instruction (Course Learning Outcomes):
After completing the course, the student will be able to:
CLO1 :Understand the basic properties of soil, soil formation and use standard method to classify soils . (1)
CLO2 : Determine compaction, permeability of soil(1)
CLO3 : Determine water seepage, total stress, pore water pressure, effective stress and stress distributed within a soil mass (1) .

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CLO4 : Recognize soil consolidation and determine consolidation settlement (1) .
CLO5: Recognize soil shear strength (1).

Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
	General Engineering Student Outcomes	
(1)	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	H (100%)
(2)	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
(3)	an ability to communicate effectively with a range of audiences	
(4)	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal context	
(5)	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
(6)	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
(7)	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	

Grading Plan:

First Exam	(30 Points)
Second Exam	(30 Points)
Final Exam	(40 Points)

General Notes:
-Students should meet in the classroom on time.
-Meetings with the instructor outside the classroom should be during the office hours.
No Make up Exam

Prepared by: Hussien Al-deeky **Date:** 23/02/2023