


College of Engineering			
Department of Civil Engineering			
CE 481 Geotechnical Engineering-2			
Credit and Contact hours	2/ 2 (Lectures), 1 (Tutorials), 0 (Laboratory)		
Required, or Elective	Required for a BSCE degree		
Course Description	Compressibility of soils. Shear strength of soils. Slopes Stability. Lateral earth pressures. Retaining walls.		
Prerequisites or Co-requisites	Geotechnical Engineering-I (CE 382)		
Course Learning Outcomes	Students completing this course successfully will be able to		
	Course Learning Outcomes		<i>Related Student Outcomes (SO)</i>
	CLO1. Apply the mechanism of soil deformation and the components of shear strength of soils in engineering problems		SO1
	CLO2. Estimate the shear strength, magnitude and rate of settlement for different soils, loadings and drainage conditions		SO1
	CLO3. Estimate the lateral earth pressure for different soils, loadings and drainage conditions.		SO1
CLO4. Analyze the stability of slopes for different soils under different drainage conditions and different site constraints to provide economical solutions with the implementation of geotechnical software		SO1	
Student Outcomes related to this Course	SO1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics, and using modern engineering tools. [ABET 1]		

Topics Covered	List of Topics		Related CLOs
	1. Introduction.		CLO1
	2. Compressibility of soils		CLO2
	3. Shear strength of soils		CLO2
	4. Slope stability.		CLO4
	5. Lateral earth pressure		CLO3
Textbook(s) and Other Required Material	1. Principles of Geotechnical Engineering by Braja M. Das, PWS-Kent, 8 th Edition. 2. Principle of Foundation Engineering (Chapter 8), Braja M. Das, 7th Edition.		
Grading System	Two Mid-term Exams	50 %	
	Assignments	10%	
	Final Exam:	40%	
Instructors	Prof. Mosleh A. Al-Shamrani (2A55), email; shamrani@ksu.edu.sa		
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