

Identification	Department	Civil Engineering		
	Program	Undergraduate		
	Subject	Foundation Engineering, 6 ECTS credits		
	Term	Fall, 2019		
	Instructor	Mehdi Bashiri		
	E-mail	mbashiri@kharaz.org		
	Phone:			
Prerequisites	Soil Mechanics			
Language	English			
Compulsory/Elective	Compulsory			
Textbooks and course materials	Principles Of Foundation Engineering 8 th edition – B.M. Das Foundation design and analysis 5 th edition, by Joseph Bowels Class notes Presentations and videos			
Teaching methods	Case analysis			x
	Group discussion			x
	Assignment(s)			x
	Lecture			x
	Course paper			
	Others			
Evaluation Criteria	Methods	Date/deadlines	Percentage (%)	
	Midterm Exam		30	
	Case studies			
	Class Participation		5	
	Quizzes		20	
	Project			
	Presentation			
	Assignments		5	
	Final Exam		40	
	Other			
Total		100%		
Course objectives	The course aims to provide the students with the knowledge needed to correctly design, monitor and reuse foundations. Foundations usually interact with both superstructures and subsoil and any approach to their design cannot neglect such interactions. The study of theoretical aspects with their applications, calculations procedures and design methods to satisfy the needs imposed by performance requirements and codes/regulations are the bases of the course.			
Learning outcomes	At the end of the course, students will be able to: Site investigations for the design of shallow and deep foundations – Soil characterization – Presentation of different types of structures and various site investigations – Optimum foundation selection: general criteria – Design calculation report - Design and management of routine monitoring systems: monitoring during construction and long-term monitoring.			
Course outline	Theoretical and Practical method of Earthquake and Structural Control			
Policy	<p>Preparation for class</p> <p>The structure of this course makes your individual study and preparation outside the class extremely important. The lecture material will focus on the major points introduced in the text. Reading the assigned chapters and having some familiarity with them before class will greatly assist your understanding of the lecture. After the lecture, you should study your notes and work relevant problems and cases from the end of the chapter and sample exam questions.</p> <p>1. Withdrawal (pass/fail)</p> <p>This course strictly follows grading policy of the School of Engineering and Applied Science. Thus, a student is normally expected to achieve a mark of at least 60% to pass. In case of failure, he/she will be required to repeat the course the following term or year.</p>			

	<p>2. Cheating/plagiarism Cheating or other plagiarism during the Quizzes, Mid-term and Final Examinations will lead to paper cancellation. In this case, the student will automatically get zero (0), without any considerations.</p> <p>3. Professional behavior guidelines The students shall behave in the way to create favorable academic and professional environment during the class hours. Unauthorized discussions and unethical behavior are strictly prohibited.</p> <p>4. Ethics Students should not arrive in late to class. All cell phones must be turned off and stowed away before entering class. Use of any electronic devices is not allowed in the classroom and violators will be punished accordingly.</p> <p>Lessons are conducted in English that's why questions and their answers must be in English.</p>
--	---

Tentative Schedule			
Week	Date	Topics	Textbook/Assignments
1		Introduction to foundation types	
2		General types of loads on foundations	
3		Bearing Capacity – Safety checks	
4		Bearing Capacity – Safety checks	
5		Eccentrically loaded footings	
6		Effects of water tables on footing capacity	
7		Footings on layered soil	
8		Midterm exam	
9		Stress attenuation of surface load	
10		Settlement	
11		Settlement	
12		Retaining wall	
13		Deep foundation (piles)	
14		Deep foundation (piles)	
15		Final Exam	