

Study program: Urban Engineering			
Type and level of studies: Bachelor academic studies			
Course unit: Soil Mechanics			
Teacher in charge: Dragan Rakić, Miroslav Živković			
Language of instruction: English			
ECTS: 6			
Prerequisites: None			
Semester: Winter Semester			
Course unit objective The course aims to provide basic knowledge from field laboratory tests of the soil physical characteristics, the method of identification and classification of soils and ways of formation of geotechnical data. Through practical exercises, students learn basic knowledge about the impact of water on the ground, calculation of stress and strain in the soil, calculation of load capacity and settlement of shallow and deep foundations, earth pressure on the retaining walls, embankment stability calculation, natural and artificial slopes, application computers in soil mechanics.			
Learning outcomes of Course unit The realization of the planned objectives.			
Course unit contents <i>Theoretical classes:</i> Introduction, literature, soil formation, soil classification; Field investigations, the type and scope of research, geomechanical profiles; The basic parameters of the soil, laboratory tests; Stresses and strains, the principle of effective stresses; The water in the soil, filtration, effective stresses, static and dynamic pressure of the water; Soil strength, test methods; Capability of soil, test methods; Calculation of stress and settlement in the soil; Calculation of earth pressure on retaining structures; Bearing capacity of shallow foundations; Calculation of load capacity of deep foundations; Calculation of slope stability; The application of finite element method to solve problems of soil mechanics. <i>Practical classes:</i> Exercise (Exercise follow the lectures)			
Literature 1. Braja M. Das, <i>Advanced Soil Mechanics</i> . London, United Kingdom. Taylor & Francis Ltd, 2014. 2. Lambe T. William, and Robert V. Whitman. <i>Soil Mechanics</i> . New York: Wiley, 1969.			
Number of active teaching hours			Other classes: -
Lectures: 30	Practice: 30	Other forms of classes: - Independent work: -	
Teaching methods: Interactive classroom lectures and exercises, knowledge verification through three colloquiums, two homeworks and final exam.			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	5	oral examination	40
practical classes/tests	45	written examination	-
Seminars/homework	10		
Project			
Grading system			
Grade	No. of points	Description	
10	91-100	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	
6	51-60	Passing	
5	<51	Failing	