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| COURSE | | GEOTECHNICAL ENGINEERING | | |
| LECTURER | | Assoc. Prof. Samir Dolarević Ph.D. | | |
| STUDY | STATUS | SEMESTER | NUMBER OF LESSONS L+E | ECTS |
| B - CE | Compulsory | 5 | 3+2 | 6 |
| OBJECTIVES | | | | |
| <ul style="list-style-type: none"> ☐ Explain basic concept of analysis of geotechnical problems and forming geotechnical model. ☐ Explain how to calculate: bearing capacity of foundation soil, settlements, slope stability, earth pressure on retaining structure. ☐ Explain how to design simple foundations, retaining walls and embankments. | | | | |
| LEARNING OUTCOMES | | | | |
| <ul style="list-style-type: none"> ☐ Ability to calculate and design simple foundations, retaining walls and embankments. ☐ Ability to analyse slope stability. | | | | |
| COURSE CONTENT | | | | |
| <ul style="list-style-type: none"> ☐ Types of foundations and modes of construction, shallow and deep foundations, pit and strutting, drainage, stabilization and soil reinforcement. Shallow foundations: pad foundation, grillage foundation, foundation plate, drainage and waterproofing, settlements, bearing capacity, structure-foundation-ground interaction, design. Deep foundations: piles and pile groups, types of piles, negative friction, plates on piles; caissons. Retaining structures and abutments. Strengthening existing foundations. Choice of foundations and basics of design: geotechnical investigation works, choice of foundation type, load-settlements ratio from small deformations to failure, load-bearing capacity, structure-foundation-ground interaction, impacts on adjacent objects, foundations of machines. Damage from foundation construction, monitoring of the foundations. Design of diaphragms. | | | | |
| RECOMMENDED LITERATURE | | | | |
| <ul style="list-style-type: none"> ☐ H. Dolarević, Fundiranj, Građevinski fakultet Sarajevo, 1989. ☐ T. Roje-Bonacci, Duboko temeljenje i poboljšanje temeljnog tla, Građevinsko-arhitektonski fakultet u Splitu, 2008. | | | | |
| Examination: | | | | |
| <p>During the course, the exam is written in two parts in writing. Each part is scored in the following way: homeworks - 10 points, partial exam - 40 points, total: 50 points.</p> <p>a) If the student achieves 55% of both parts, the final grade is formed according to the scale prescribed by the Law on Higher Education. Students who lack less than 5 points for grades 8, 9 and 10 are allowed to take the final oral exam for a higher grade.</p> <p>b) Students who pass only one partial exam, on the final exam will lay in writing the part that has not been passed. The grade is formed as under a) except that there is no option for a higher grade.</p> <p>c) Students who do not pass any partial exam, lay final exam in writing in an integral form.</p> <p>The grade is formed: 50% of points earned during the course + 50% of points earned at the final exam.</p> <p>Canceling the exam: Students who have placed both parts and are not satisfied with the result achieved in one part can cancel it and take the part at the final exam.</p> | | | | |