Faculty of Civil Engineering / CIVIL ENGINEERING / SPECIAL TECHNIQUES OF FOUNDATION ENGINEERING

Course:	SPECIAL TECHNIQUES OF FOUNDATION ENGINEERING			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
10906	Mandatory	6	4	2+1+1
Programs	CIVIL ENGINEERING			
Prerequisites	-			
Aims	The aim of the course is to acquire knowledge about special techniques for building foundations in specific foundation conditions.			
Learning outcomes	After passing this exam, the student will be able to participate in the development of projects and the execution of specific types of shallow and deep foundations; creating design for the protection of foundation pits and improvement of the foundation soil; development of projects and execution of foundations in specific foundation conditions (marine structures, deep open water, landslides,filled soil, tailings and sanitary landfills).			
Lecturer / Teaching assistant				
Methodology				
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction. Defining soil and environmental conditions that require the application of special foundation construction techniques.			
I week exercises	The foundation of the column of the industrial hall.			
II week lectures	Construction of foundations in deep open water.			
II week exercises	The foundation of the column of the industrial hall.			
III week lectures	Application of computers in solving foundation problems. Winkler soil model. A soil model in which it is assumed that the soil is elastic, homogeneous and isotropic. Calculation of the foundation on an elastic base using the differential method. Problems of structure-foundation interaction, and foundation- soil interaction. Modeling of the soil-structure interaction using the finite element method.			
III week exercises				
IV week lectures				
IV week exercises				
V week lectures				
V week exercises				
VI week lectures				
VI week exercises				
VII week lectures				
VII week exercises				
VIII week lectures				
VIII week exercises				
IX week lectures				
IX week exercises				
X week lectures				
X week exercises				
XI week lectures				
XI week exercises				
XII week lectures				
XII week exercises				

XIII week lectures	
XIII week exercises	
XIV week lectures	
XIV week exercises	
XV week lectures	
XV week exercises	
Student workload	

Per week	**Per semester**
4 credits x 40/30=5 hours and 20 minuts 2 sat(a) theoretical classes 1 sat(a) practical classes 1 excercises **1 hour(s) i 20 minuts** of independent work, including consultations	Classes and final exam: **5 hour(s) i 20 minuts x 16 =85 hour(s) i 20 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **5 hour(s) i 20 minuts x 2 =10 hour(s) i 40 minuts** Total workload for the subject: **4 x 30=120 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **24 hour(s) i 0 minuts** Workload structure: **85 hour(s) i 20 minuts (cources), 10 hour(s) i 40 minuts (preparation), 24 hour(s) i 0 minuts (additional work)**
Student obligations	
Consultations	
Literature	
Examination methods	
Special remarks	
Comment	

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points