Course Unit Descriptor

Study Programme: CIVIL ENGINEERING

Course Unit Title: FOUNDATION

Course Unit Code: 045

Name of Lecturer(s): PETAR SANTRAČ

Type and Level of Studies: Undergraduate academic studies

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Winter

Language of instruction: Serbian

Mode of course unit delivery (face-to-face/distance learning): face-to face

Number of ECTS Allocated: 6

Prerequisites: Basic of Foundation

Course Aims:
The subject aims to provide basic knowledge of the fundamental design of complex systems, analysis of shallow foundations (beams, grids, slabs) on a deformable media, deep foundations in the deformable media, soil and foundation interaction, application of computers in foundation analysis.

Learning Outcomes:
The realization of the planned objectives.

Syllabus:
Theory
1st week Introduction, literature, legislation, commercial software in Foundation analysis.
2nd week Beam on deformable subgrade
3rd week Beam on deformable subgrade
4th week Raft on deformable subgrade
5th week Mats and slabs on deformable subgrade
6th week Aplication of computers for analysis of shallow foundations on deformabile subgrade
7th week Soil structure interaction
8th week Deep massive foundation in deformable medium
9th week Deep foundation – piles in deformable medium
10th week Deep foundation – piles in deformable medium
11th week Aplication of computers for analysis of deep foundations in deformable medium
12th week Retaining walls in deformable medium
13th week Retaining walls in deformable medium
14th week Aplication of computers for analysis of deep foundations in deformable medium
15th week Seismic analysis of shalow and deep foundations
Practice: 15 Practical works

Required Reading:
1. P.Santrač: Foundation - written lectures, ″Faculty of Civil Engineering Subotica″, Subotica, 2006.
2. B. Ilić: Foundation I, ″Faculty of Civil Engineering Subotica″, Subotica, 1998.
3. S. Stevanović: Foundation I, ″Naučna knjiga″, Belgrade, 1989.
4. E. Nonveiler: Soil mechanics and foundation construction, ″Školska knjiga″, Zagreb, 1990.
5. Group of authors: Complicate foundation, ″Naučna knjiga″, Belgrade, 1980.

Weekly Contact Hours: 5	**Lectures:** 2	**Practical work:** 2

Teaching Methods: Lectures, exercises, seminars, consultations

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam or Colloquia(s)	25
Practical work	15	oral exam	55
Preliminary exam(s)		…….	
Seminar(s)			

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.