

Subject Title: Concrete Structures

Basic information on the Subject			
Academic unit:	Faculty of Civil Engineering		
Subject title:	Concrete Structures		
Level:	Master		
Subject status:	Obligatory		
Year of studies:	First Year		
Number of hours per week:	2+2		
ECTS credits:	6		
Time / Place:	According to the timetable		
Teacher:	Prof.ass. Dr. Kadri Morina		
Contact details:	e-mail: kadri.morina@uni-pr.edu		
Course description:			
	Horizontal action on structure (wind and Earthquake), frame structures, separation joints, retaining walls, circular slabs, deep beams, corbels, pined joints and local stresses, slender columns, design of concrete cross sections according to the theory of plasticity, design of concrete cross sections according combined bending, serviceability limit state (stresses, cracks and deflections), design of columns and beams for local ductility, as well as considering of an element subject to fatigue.		
Course objectives:			
	Further expansion of knowledge in the field of Concrete Structures gained from previous courses. <ul style="list-style-type: none"> • Training the students to calculate and design RC elements as well as to prepare reinforcement drawing details. • Students to be able to propose adequate dimensions of elements depending on the use of the building and based on the conditions given in the design task. 		
Expected learning outcomes:			
	Students to be familiar with the general concepts of design of the construction elements and able to calculate / design them for all construction stages, and reinforcement detailing.		
Importance and Course:			
	The course is one of the basic subjects intended to future engineers aiming to deal with design and construction.		
Workload that falls on the student (shall correspond with Student Learning Outcomes)			
Activity	Class hours	Days / Weeks	Gjithsej
Lectures	2	1	30
Theory / Laboratory work / Exercises	2	1	30
Practical work	-	-	-
Preparation for intermediate test	-	-	-
Consultation with the teacher	1	1	15
Field work			4
Test, seminar paper			2
Home work	2	1	30
Individual learning (in the library or	2	1	25

at home)			
Preparing for the final exam			10
Assessment time (test, quiz, final exam)			1
Projects, presentations, etc.			3
Add any other activity that is not on the chart ...			
Total			150
Teaching methods:	Lectures, exercises and individual seminar work		
Evaluation methods:	First test: 10% Second test 10% Semester assignments / projects or other commitments 25% Regular attendance 5% Final exam 50% Total 100%		
Basic literature:	- Authorized lectures - EC-1 , Ec-2, EC-7, EC-8,		
Additional literature:	1. <i>Ivan Tomičić</i> : Betonske konstrukcije Zagreb 2. <i>J.Radić</i> : Betonske konstrukcije Zagreb		
Curriculum development			
Week	Lecture title		
Week 1:	Action of horizontal loads on the structure		
Week 2:	Frames and expansion joints		
Week 3:	Circular slabs and retaining walls		
Week 4:	Deep beams		
Week 5:	Corbel and local stresses		
Week 6:	Initial evaluation		
Week 7:	Slender column and their design		
Week 8:	Design of a cross-section based on the theory of plasticity		
Week 9:	Design of the cross-section subject to combined bending		
Week 10:	Serviceability Limit State (stresses, cracking, deflections) (SLS)		
Week 11:	Serviceability Limit State (stresses, cracking, deflections) (SLS)		
Week 12:	Serviceability Limit State (stresses, cracking, deflections) (SLS)		
Week 13:	Design of columns and beams for local ductility		
Week 14:	Consideration of an element subject to fatigue		
Week 15:	Second test		

Academic Policies and Code of Conduct

Tools used during lessons should be cleaned and appropriately stored at the end of the class lesson.

Mobile / smart phones and other electronic devices (eg. iPods) should be turned off (or silent mode) and not exposed during school hours.

Laptops and tablet computers are only allowed to be used silently; other activities such as checking personal email or browsing websites are prohibited.