

Study program:	Civil Engineering		
Level of study:	Undergraduate academic studies		
Course title:	Concrete structures II		
Teacher:	Danica, J, Goleš		
Course Status:	Compulsory		
Credits (ECTS):	5		
Prerequisite:	Concrete structures I		
Course objective(s):	Acquiring knowledge about analysis, shaping, reinforcement and construction of RC crane girders, foundations, RC slabs and shell structures, bunkers, silos, reservoirs and water towers. Introduction to basic principles of design of multi-storey buildings. Introduction to basic principles and elements of industrial construction of reinforced concrete structures.		
Course outcome(s):	Qualification for independent calculation and adoption of materials, shapes, dimensions and reinforcement of RC crane girders, foundations, RC slabs and shell structures, bunkers, silos, reservoirs and water towers, and their graphical representation for the project of structure. Basic knowledge of the basic principles of design of multi-storey buildings and industrial construction of reinforced concrete structures		
Course Content:			
1 st week	RC slabs. Shaping. Structural analysis. Dimensioning. Reinforcements.		
2 nd week	Rectangular one-way solid RC slabs.		
3 rd week	Rectangular two-way solid RC slabs.		
4 th week	Trapezoidal, triangular and circular solid RC slabs.		
5 th week	RC ribbed floor structures.		
6 th week	RC waffle floor structures.		
7 th week	RC slabs with column head.		
8 th week	RC stairs.		
9 th week	Prefabricated RC floor structures. RC crane girders.		
10 th week	RC foundations.		
11 th week	RC walls.		
12 th week	Design and calculation of multi-storey RC skeletal buildings.		
13 th week	RC shells and folded plate structures.		
14 th week	Design and calculation of RC bunkers and silos		
15 th week	Industrial construction of RC elements: slabs, beams, columns, frames and footings. Structural characteristics, fabrication, transportation and installation of elements.		
	Week by week practice is following lectures		
Literature:	<ol style="list-style-type: none"> 1. Group of Authors: Priručnik za primenu PBAB'87, Građevinska knjiga, Beograd, 1991. 2. EN 1992-1-1:2004 Eurocode 2: Design of concrete structures - Part 1-1: General rules and rules for buildings 3. Ž. Radosavljević, D. Bajić: Armirani beton 3, Građevinska knjiga, Beograd, 1989. 4. I. Tomičić: Betonske konstrukcije, Školska knjiga, Zagreb, 1988. 		
Number of hours:			Other classes: 0
Lectures: 3	Exercises: 2	Other forms of teaching: 0	Individual research work: 0
Teaching methods: Lectures, exercises, seminars, consultations			
Evaluation of knowledge (maximum 100 points)			
Pre-exam activities	points	Final exam	points
Activity during the lectures	5	Written exam	30
Practical work	5	Oral exam	30
Seminar paper	30	-	-