

## Syllabus title: Concrete Structures Elements

Basic information on the subject			
Academic unit:	Faculty of Civil Engineering		
Subject title:	Concrete Structures Elements		
Level:	Bachelor		
Subject status:	Mandatory		
Year of studies:	third (III), sixth (VI) semester		
Number of classes in a week:	2+2		
Amounts of credits - ECT:	6 ECTS		
Time / location:	According to the time table		
Subject teacher:	Prof.ass.Dr. Kadri Morina		
Contact Details:	Email: <a href="mailto:kadri.morina@uni-pr.edu">kadri.morina@uni-pr.edu</a> <a href="http://www.fn.uni-pr.edu">www.fn.uni-pr.edu</a>		
Description of the subject:	The course of <b>Elements of Concrete Structures</b> enables an introduction to reinforced concrete elements, unfavorable statics design of elements and design to ultimate limit states and to serviceability limit states. In this course, the students shall be introduced to main reinforced concrete elements, slabs, beams, columns, and foundations.		
Objectives of the subject:	The objective of the subject Basics of <b>Elements of Concrete Structures</b> consists in continuation of knowledge to students in elements of concrete in construction having in mind that the knowledge of concrete out of which various engineering buildings are constructed from is a requirement and a necessary condition for the designer and for the constructor of any building in the engineering practice. Within this subject the student will gain the basic information on the procedures for implementation of reinforced concrete elements, their design, and calculations due to possible static loading, and the ways of reinforcement, at the same time this is a continuation of the preceding subject dealing with concrete structures.		
Expected results in learning:	Students will have an understanding on: <ul style="list-style-type: none"> <li>- construction of structural elements</li> <li>- transfer of loads to structural elements, calculation of unfavorable influences, M, V, N on structural elements.</li> <li>- design of structural elements,</li> <li>- development of reinforcement details and the reinforcement specifications.</li> </ul>		
Load contribution on student (which shall correspond with the student learning achievement)			
Activity	Classes	Days/weeks	Total
Lectures	2	15	30
Exercises / laboratory work	2	15	30
Practical work	3	2	6
Contacts with lecturer / consultancy	1	9	9

Field exercises			
Interim tests, seminars	2	3	6
Home work	1	15	15
Time for individual studying (at a library or home)	2	15	30
Preparing for final exam	2	7	14
Time spent for evaluation (tests, quizzes, final exam)	4	2	8
Projects, presentations, etc.	2	1	2
<b>Total</b>			<b>150</b>
<b>Teaching methodology:</b>			
	<i>Teaching methods, regular intensive combinations (lectures 15 weeks, exercises 15 weeks) – combined with presentations, video beames. -exercises with individual semestral works. -vizits on construction sites.</i>		
<b>Assessment methods:</b>			
	<i>assesment methods: First test: 10% Second test 10% Semestral project 15% Attendance 5% Written exam 30% Oral exam 30% Total 100%</i>		
<b>Literature</b>			
<b>Basic Literature:</b>			
	<i>- Elements of Concrete Structures, script, K. Morina , H. Sylejmani dhe N. Hoxha - EC 1, EC 2</i>		
<b>Additional Literature:</b>			
	<i>Ivan Tomičić: Concrete Structures, Zagreb, K. Negovani and N. Verdho, Reinforced Concrete Structures, Tirana, Andrej Spasov : Concrete Structures, Skopje</i>		
<b>Teaching plan design:</b>			
<b>Week</b>	<b>Lectures to be developed</b>		
<b>Week one:</b>	<i>Naming elements in a structure, wind loads on a structure, ,</i>		
<b>Week two:</b>	<i>Elements of a structure, slabs.</i>		
<b>Week three:</b>	<i>Cantilever slab, simply supported slab , beam slab with cantilevers, loading analysis , unfavorable static loading, design and reinforcement detailing.</i>		
<b>Week four:</b>	<i>Continuous slab, fixed slab at both ends, loading analysis, unfavorable static loadings, design and reinforcement detailing.</i>		
<b>Week five:</b>	<i>Two way supported slabs, design and calculations.</i>		
<b>Week six:</b>	<i>Construction and reinforcement detailing of two way slabs.</i>		
<b>Week seven:</b>	<i>One way ribbed slabs, design and calculation</i>		
<b>Week eight:</b>	<i>Stairs, construction, design and calculation</i>		
<b>Week nine:</b>	<i>Beams.</i>		
<b>Week ten:</b>	<i>Construction and reinforcement of beams</i>		
<b>Week eleven:</b>	<i>Beams and walls, construction and reinforcement.</i>		

<b>Week twelve:</b>	<i>Serviceability limit dtates, deflection calculation.</i>
<b>Week thirteen:</b>	<i>Serviceability limit dtates, calculation of cracks.</i>
<b>Week fourteen:</b>	<i>Pad foundation, centric, small eccentricity and big eccentricity.</i>
<b>Week fifteen:</b>	<i>Strip foundation, raft foundtation, pile foundation.</i>
<b>Academic policies and code of conduct:</b>	
<p><i>We start and finish class on time.</i></p> <p><i>Tools used during class must be cleaned and stored away at the end of class.</i></p> <p><i>Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.</i></p> <p><i>Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.</i></p>	