

## Course title: Structure Analysis II

Course Basic Information			
Academic Unit:	Faculty of Civil Engineering		
Course title:	Structure Analysis II		
Level:	Bachelor		
Course Status:	Compulsory		
Year of Study:	III-third		
Number of Classes per Week:	3+2		
ECTS Credits:	6		
Time /Location:	According to the Timetable		
Teacher:	Prof.Asoc.Fatos Pllana		
Contact Details:	email: <a href="mailto:fatos.pllana@uni-pr.edu">fatos.pllana@uni-pr.edu</a> <a href="http://www.fn.uni-pr.edu">www.fn.uni-pr.edu</a>		
<b>Course Description:</b>			
	In this course indeterminate structures are analyzed, which includes MTN forces, influence lines in indeterminate frame structures and trusses. These problems are analyzed with Force Method and Stiffness Method.		
<b>Course Goals:</b>			
	Main goals of this course are that student to be able to calculate statically indeterminate structures, linear frames and trusses. To adopt methods which are used to calculate this type of structures, and to adopt knowledge about influence lines. Also, successfully to finish tasks where is included literature. At the end, student should be able to continue the next level of studies.		
<b>Expected Learning Outcomes:</b>			
	To understand statically systems of building structures, to understand to calculate MTN diagrams, influence lines of statically indeterminate linear frames and trusses. In this way, to be able to finish complete analysis of frames and trusses.		
Student Workload (should be in compliance with student's Learning Outcomes)			
Activity	Hours	Day/ Week	Total
Lectures	3	15	45
Theory/ Lab Work/Exercises	2	15	30
Practical Work	0	0	0
Consultations with the teacher	2	5	10
Field Work	0	0	0
Test, seminar paper	2	4	8
Homework	1	15	15
Self-study (library or home)	1	15	15
Preparation for final exam	4	5	20
Assessment time (test, quiz, final exam)	1	7	7
Projects, presentations, etc.	0	0	0
<b>Total</b>			<b>150</b>
<b>Teaching Methods:</b>			
	<i>Lectures, exercises during class using different materials, one project work in group of 2-3 students (independent work), individual homework</i>		

<b>Assessment Methods:</b>	Individual assignments completed in class 30%; Individual assignments completed at home 30%; Exam 40%.
<b>Primary Literature:</b>	"Script of static of structures II" by course teacher
<b>Additional Literature:</b>	<ol style="list-style-type: none"> <li>1. <b>Jagxhiu F.:</b> <i>Rezistenca e materialeve (pjesa e parë), Universiteti i Prishtinës, FNA, Prishtinë, 1995</i></li> <li>2. <b>Skenderi S.:</b> <i>Statika e ndërtimit I, Revista-Dispenca, Tiranë, 1974</i></li> <li>3. <b>Skenderi S.:</b> <i>Statika e ndërtimit II, Revista-Dispenca, Tiranë, 1975</i></li> <li>4. <b>Skenderi S.:</b> <i>Statika e ndërtimit III, Revista-Dispenca, Tiranë, 1975</i></li> <li>5. <b>Pllana F.:</b> <i>Ligjerata të autorizuaranga lënda "Statika e Konstruksioneve 2" I, FNA, Prishtinë, 1996</i></li> <li>6. <b>Đurić M.:</b> <i>Statika Konstrukcija, Beograd, 1979</i></li> <li>7. <b>Sekulović. M.:</b> <i>Teorija linijskih nosača, Građevinska Knjiga, Beograd</i></li> <li>8. <b>Softa F.:</b> <i>Teoria e Strukturave, Tiranë, 1990</i></li> <li>9. <b>Sekulović M.:</b> <i>Teorija linijskih nosača, Građevinska Knjiga, Beograd</i></li> </ol>

Designed teaching plan	
Week	Title of the Lecture
<b>Week 1:</b>	Introduction Statically indeterminate structures Theoretical bases for calculating of Statically indeterminate structures
<b>Week 2:</b>	Methods for <i>structural</i> analysis of Statically indeterminate structures
<b>Week 3:</b>	Force method
<b>Week 4:</b>	The flexibility matrix coefficients
<b>Week 5:</b>	Control of the flexibility matrix coefficients
<b>Week 6:</b>	Influence of temperature changes and support shift in statically indeterminate structures
<b>Week 7:</b>	Simplification on solutions of symmetric structures with force method
<b>Week 8:</b>	Influence lines at Statically indeterminate structures
<b>Week 9:</b>	Influence lines at Statically indeterminate frames and trusses
<b>Week 10:</b>	Stiffness Method
<b>Week 11:</b>	Definition of base system-kinematically determinate system
<b>Week 12:</b>	Flexibility and stiffness of structures
<b>Week 13:</b>	Stiffness Method in matrix form
<b>Week 14:</b>	Stiffness matrices of characteristic elements
<b>Week 15:</b>	Formation of Stiffness matrix of system by KOD method

Academic Policies and Code of Conduct
<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>

**Note |** If a student has more than 3 class assignments evaluated below 50% he/she loses the right on taking the final exam. Evaluation is done from 0-100 %.