

Study program / course: Mechanical Engineering				
Type and level of study: Basic academic studies				
Course: Strength of Materials				
Lecturers: Ružica R. Nikolić				
Status of course: Joint for all modules, II semester				
Number of ECTS: 6				
Prerequisite: Mechanics I (Statics)				
The course objective Enabling students to solve the problems from the Strength of Materials and to apply the acquired knowledge in practice and in solving problems from other areas that are the continuance of studies in structural strength and integrity.				
The course outcome Student is capable to independently solve problems of the structural strength, especially axial loads, torsion and bending of beams, both statically determined and undetermined, and to apply the acquired knowledge in further studies and in the engineering practice.				
Syllabus Theoretical study Introduction to strength of Materials. Stresses and strains in structures. Cross-sectional moments of inertia. Axial loads. Torsion of the circular and tubular bars. Pure and skewed bending. Buckling of columns loaded in compression. Eccentrically compressed columns. Solving statically undetermined girders. Plane stress and plane strain states. Material failure hypotheses. Practical classes Problems solving, homeworks, tests and colloquia. (Same areas as for theoretical lecturing)				
Recommended reading 1. Rašković,D., "Strength of Materials", Faculty of Mechanical Engineering, Belgrade, 1980 (In Serbian). 2. Rašković,D., "Tables for Strength of Materials", Faculty of Mechanical Engineering, Belgrade, 1976 (In Serbian). 3. Brčić, V., "Strength of Materials", The Civil Engineering Book, Belgrade, 1975, (In Serbian). 4. Čirović,M., "Strength of Materials I", Faculty of Mechanical Engineering, Kragujevac, 2008 (In Serbian). 5. Nikolić, R. and I.Miletić, "Strength of Materials", Lecture notes (In E-form)				
The number of hours of active teaching:				Other classes: 1
Theory: 2	Practical classes: 2	Other forms of teaching: Consultations 0	Research study: 0	
Methods of teaching Lecturing, Practical work, consultations (group and individual)				
Evaluation of knowledge				
Pre-final exam obligations	Points	Final exam*		Points*
Activities during the classes:	5			30
Activities during the exercises	5			
Tests:	30			
Homeworks:	20			
* The final test is taken only by candidates that are not satisfied with their score on tests and colloquia. In that case, only the score on final test is counted for the final grade.				