

**Faculty of Architecture / ARCHITECTURA / NEW TECHNOLOGIES AND MATERIALS**

<b>Course:</b>	NEW TECHNOLOGIES AND MATERIALS			
<b>Course ID</b>	<b>Course status</b>	<b>Semester</b>	<b>ECTS credits</b>	<b>Lessons</b> (Lessons+Exercises+Laboratory)
4378	Mandatory	6	3	2+1+0
<b>Programs</b>	ARCHITECTURA			
<b>Prerequisites</b>	No prerequisites required.			
<b>Aims</b>	Students should be familiar with basic categories and concepts in the field of new technologies and materials.			
<b>Learning outcomes</b>	It is expected that the student after passing the exam New technologies and materials: 1. Has adequate knowledge about structural systems, construction issues and modern technologies, relevant for architectural design; 2. Has adequate knowledge of the physical properties and characteristics of building materials, components and systems, as well as the influence of the same choices on the environment.			
<b>Lecturer / Teaching assistant</b>	Prof. dr Ratko Mitrović			
<b>Methodology</b>	Lectures, consultations, tests and final examination.			
<b>Plan and program of work</b>				
Preparing week	Preparation and registration of the semester			
I week lectures	Classification and general on construction technology (traditional, industrial, assembly and cell systems)			
I week exercises	Classification and general on construction technology (traditional, industrial, assembly and cell systems)			
II week lectures	Traditionally-rationalized construction systems			
II week exercises	Traditionally-rationalized construction systems			
III week lectures	Rationalized construction systems			
III week exercises	Rationalized construction systems			
IV week lectures	Prefabricated construction systems			
IV week exercises	Prefabricated construction systems			
V week lectures	Large portable and prefabricated formwork			
V week exercises	Large portable and prefabricated formwork			
VI week lectures	Prefabricated steel construction systems			
VI week exercises	Prefabricated steel construction systems			
VII week lectures	Test			
VII week exercises	Test			
VIII week lectures	Prefabricated reinforced concrete large-panel system			
VIII week exercises	Prefabricated reinforced concrete large-panel system			
IX week lectures	Industrialization and cell construction systems			
IX week exercises	Industrialization and cell construction systems			
X week lectures	Industrialization as the ultimate goal, the construction of buildings			
X week exercises	Industrialization as the ultimate goal, the construction of buildings			
XI week lectures	New materials and technologies for the execution of the interior			
XI week exercises	New materials and technologies for the execution of the interior			
XII week lectures	New technologies and materials for the construction of facades of buildings			
XII week exercises	New technologies and materials for the construction of facades of buildings			
XIII week lectures	New materials and technologies in building construction			
XIII week exercises	New materials and technologies in building construction			

XIV week lectures	New materials and technologies for the performance of energy efficient buildings					
XIV week exercises	New materials and technologies for the performance of energy efficient buildings					
XV week lectures	Final examination					
XV week exercises	Final examination					
<b>Student workload</b>	2L+1E					
<b>Per week</b>			<b>Per semester</b>			
<b>3 credits x 40/30=4 hours and 0 minuts</b> 2 sat(a) theoretical classes 0 sat(a) practical classes 1 excercises <b>1 hour(s) i 0 minuts</b> of independent work, including consultations			Classes and final exam: <b>4 hour(s) i 0 minuts x 16 =64 hour(s) i 0 minuts</b> Necessary preparation before the beginning of the semester (administration, registration, certification): <b>4 hour(s) i 0 minuts x 2 =8 hour(s) i 0 minuts</b> Total workload for the subject: <b>3 x 30=90 hour(s)</b> Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) <b>18 hour(s) i 0 minuts</b> Workload structure: <b>64 hour(s) i 0 minuts (cources), 8 hour(s) i 0 minuts (preparation), 18 hour(s) i 0 minuts (additional work)</b>			
<b>Student obligations</b>						
<b>Consultations</b>						
<b>Literature</b>			Branislav Ivkovic Dragan Arizanović - Organization and technology of construction work Goran Ćirović Trouble planning, construction technology and organization Atanas Filipovski - Meteln design for architects,			
<b>Examination methods</b>			Semester final works - 2 x 25 = 50 points - Final examination = 50 points - Passing grade gets the raise at least 51 points			
<b>Special remarks</b>			: Lectures are held in the amphitheater (for all students).			
<b>Comment</b>			Additional information can be obtained from the subject teacher, head of the study program with Dean for Academic Affairs.			
<b>Grade:</b>	F	E	D	C	B	A
<b>Number of points</b>	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points