

<b>Study program: Civil Engineering</b>			
<b>Course: Timber and Steel Structures</b>			
<b>Professor/assistant: PhD Nenad Stojković / PhD Nenad Stojković</b>			
<b>Status of course: elective</b>			
<b>ECTS credits: 6</b>			
<b>Pre-requisites: none</b>			
<b>Aims of the course:</b> The aim of the course is to prepare a student to: <ul style="list-style-type: none"> <li>- understand the behavior of elements of timber and steel structures;</li> <li>- perform the dimensioning of elements of simple timber and steel structures;</li> <li>- analyze and discuss the aspects of construction of timber and steel structures;</li> <li>- be involved in production and analysis of project documentation.</li> </ul>			
<b>Learning outcomes:</b> After finishing the course, a student will be able to: <ul style="list-style-type: none"> <li>- select appropriate materials for timber and steel structures;</li> <li>- determine structural loads, geometry, support conditions, and material properties;</li> <li>- determine bearing capacity of structural elements;</li> <li>- design connections in timber and steel structures;</li> <li>- produce and analyze technical drawings and project documentation.</li> </ul>			
<b>Syllabus:</b> <u>Theoretical part</u> Timber structures - application, advantages and disadvantages. Material properties. Design principles. Load analysis. Mechanical characteristics. Allowed stress. Allowable deflections. Stress analysis. Analysis of elements subjected to tension, compression and bending. Design of joints. Steel structures - application, advantages and disadvantages. Material properties. Basic design concepts. Load analysis. Dimensioning procedures. Design of connections (bolting and welding). Design of extensions. <u>Practical part</u> Application of theoretical basis to practical examples. Solving practical problems. Performing the design of steel and timber structure in the form of 2 project assignments (manually or by using relevant software).			
<b>Literature:</b> <ol style="list-style-type: none"> <li>1. Mitrović, S., <i>Metalne i drvene konstrukcije 1</i>, Visoka građevinsko-geodetska škola, Belgrade, 2011.</li> <li>2. Buđevac, D., i dr., <i>Čelične konstrukcije u građevinarstvu</i>, Građevinska knjiga, Belgrade, 2007.</li> <li>3. Rajčić, V., Bjelanović, A., <i>Drvene konstrukcije prema evropskim normama</i>, Građevinski fakultet, Belgrade, 2007.</li> <li>4. Gojković, M. i dr., <i>Drvene konstrukcije</i>, Građevinska knjiga, Belgrade, 2007.</li> </ol>			
<b>Number of active classes</b>			<b>Other forms of teaching:</b>
Lectures: 2	Practical classes: 2	Laboratory classes: 0	
<b>Teaching methods:</b> Interactive classes incl. solving practical examples.			
<b>Grading system</b> (maximum 100 points), <b>grading scale</b> from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
<b>Pre-commitments</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
activity during lectures	10	written exam	30
colloquium(s)	10 + 10	oral exam	20
seminar paper(s)	20		
<b>Sum</b>	<b>50</b>	<b>Sum</b>	<b>50</b>