

<b>Study Programme:</b> Civil Engineering																														
<b>Course Unit Title:</b> Glued laminated timber structures																														
<b>Course Unit Code:</b> 046																														
<b>Name of Lecturer(s):</b> Assistant Professor Ljiljana M. Kozarić																														
<b>Type and Level of Studies:</b> Undergraduate academic studies																														
<b>Course Status (compulsory/elective):</b> Elective																														
<b>Semester (winter/summer):</b> Winter																														
<b>Language of instruction:</b> English																														
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face																														
<b>Number of ECTS Allocated:</b> 5																														
<b>Prerequisites:</b> Strength of Materials 1 and 2, Timber structures																														
<p><b>Course Aims:</b></p> <p>This course introduces students to the production and design of glued laminated timber constructions. Students are gaining knowledge about basic procedures for design and construction of structures made of laminated timber elements. They are introduced to application of valid national regulations and with the new European regulations in the laminated timber field.</p>																														
<p><b>Learning Outcomes:</b></p> <p>Realization of the foreseen goals.</p>																														
<p><b>Syllabus:</b></p> <p><i>Theory</i></p> <table> <tr> <td>1st week</td> <td>The permissible stress design in timber structures.</td> </tr> <tr> <td>2nd week</td> <td>The permissible stress design in glued laminated timber structures.</td> </tr> <tr> <td>3rd week</td> <td>Glued laminated timber structures. Structural elements. Design principles and calculations.</td> </tr> <tr> <td>4th week</td> <td>Stability design.</td> </tr> <tr> <td>5th week</td> <td>Glued laminated timber roof constructions. Structural elements. Design principles and calculations.</td> </tr> <tr> <td>6th week</td> <td>Design according to EC-5.</td> </tr> <tr> <td>7th week</td> <td>Guidelines for preparing a seminar paper.</td> </tr> <tr> <td>8th week</td> <td>Glues. Types, methods of applications and testing. Design of adhesive joints.</td> </tr> <tr> <td>9th week</td> <td>Manufacturing process of glued laminated timber structural elements.</td> </tr> <tr> <td>10th week</td> <td>Halls. Layout design.</td> </tr> <tr> <td>11th week</td> <td>Halls. Structural elements. Design principles and calculations.</td> </tr> <tr> <td>12th week</td> <td>Connection details.</td> </tr> <tr> <td>13th week</td> <td>Bridges.</td> </tr> <tr> <td>14th week</td> <td>Excursion.</td> </tr> <tr> <td>15th week</td> <td>Submission of a seminar paper. Summarizing course content.</td> </tr> </table> <p><i>Practice</i></p> <p>Week by week practice is following lectures</p>	1st week	The permissible stress design in timber structures.	2nd week	The permissible stress design in glued laminated timber structures.	3rd week	Glued laminated timber structures. Structural elements. Design principles and calculations.	4th week	Stability design.	5th week	Glued laminated timber roof constructions. Structural elements. Design principles and calculations.	6th week	Design according to EC-5.	7th week	Guidelines for preparing a seminar paper.	8th week	Glues. Types, methods of applications and testing. Design of adhesive joints.	9th week	Manufacturing process of glued laminated timber structural elements.	10th week	Halls. Layout design.	11th week	Halls. Structural elements. Design principles and calculations.	12th week	Connection details.	13th week	Bridges.	14th week	Excursion.	15th week	Submission of a seminar paper. Summarizing course content.
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<p><b>Required Reading:</b></p> <ol style="list-style-type: none"> <li>1. Gojković Milan: Drvene konstrukcije, Građevinska knjiga, Beograd, 1990.</li> <li>2. Gojković Milan: Boško Stevanović : Drvene konstrukcije, Građevinska knjiga, Beograd, 1990.</li> </ol>																														

3. Važeći propisi i standardi, EC-5			
4. Romić: Lepljene lamelirane konstrukcije, Građevinska knjiga, Beograd, 1994.			
<b>Weekly Contact Hours: 5</b>		<b>Lectures: 2</b>	
<b>Practical work: 2</b>			
<b>Teaching Methods:</b> Lectures, exercises, seminars, consultations			
<b>Knowledge Assessment (maximum of 100 points):</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation	5	written exam	30
Practical work	5	oral exam	30
Preliminary exam(s)	/	.....	
Seminar(s)	30		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			