

<b>Study Programme: Civil Engineering</b>			
<b>Course Unit Title: Energy efficiency and certification of buildings</b>			
<b>Course Unit Code: EEA02</b>			
<b>Name of Lecturer(s): Malešev Mirjana, Bulatović Vesna, Lukić Ivan</b>			
<b>Type and Level of Studies: master</b>			
<b>Course Status (compulsory/elective): elective</b>			
<b>Semester (winter/ summer): winter</b>			
<b>Language of instruction: english</b>			
<b>Mode of course unit delivery (face-to-face/distance learning): face-to-face</b>			
<b>Number of ECTS Allocated: 6</b>			
<b>Prerequisites: none</b>			
<b>Course Aims:</b> Introduction to European directives, rule books and codes in the field of energy efficiency of buildings. Acquiring knowledge and skills necessary for the design and construction of energy efficiency buildings.			
<b>Learning Outcomes:</b> Student possesses specialized theoretical and expert knowledge for design, construction and certification of energy efficient buildings. Student is capable of independently solving complex problems regarding the formation of energy efficient elements and assemblies of thermal envelope of buildings depending on climatic and location conditions. It applies the methodology and methods of calculation for determining the total heat losses and gains, the required energy for heating and for the assessment of the energy class of the building.			
<b>Syllabus.</b> EU Directives. Experience of European countries in energy efficiency. National regulations in the field of energy efficiency of buildings (Rule books for energy efficiency and building certification and accompanying standards). Comfort conditions. Calculation of thermotechnical properties of elements and assemblies of thermal envelope of buildings. Calculation of the thermal performances of buildings. Examples of design of the Energy Efficiency reports for new and existing buildings. Examples of energy passport for a building.			
<b>Required Reading:</b> Relevant literature in English, tbd			
<b>Weekly Contact Hours:2</b>	<b>Lectures: 2</b>	<b>Practical work: 2</b>	
<b>Teaching Methods:</b> Lectures, Auditory Exercises and Consultations. Elaboration of a subject design - Energy Efficiency Report is obligatory. Student's effort and progress during lectures and exercises are evaluated as well as elaboration and defense of the subject design. The exam is taken orally.			
<b>Knowledge Assessment (maximum of 100 points):</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Attendance			
Computer exercises			
Tests (4x)			

