

Course Unit Descriptor

Study Programme: Civil Engineering			
Course Unit Title: Seismic Analysis of Structures			
Course Unit Code: GG502			
Name of Lecturer(s): Prof. dr Đorđe Lađinović			
Type and Level of Studies: Master Level			
Course Status (compulsory/elective): compulsory			
Semester (winter/summer): Winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 6			
Prerequisites: None			
Course Aims: Obtaining knowledge necessary for aseismic design of construction structures			
Learning Outcomes: Enabling students to calculate the influences in a structure due to earthquake action and to design seismically resistant structures in construction practice.			
Syllabus: General on earthquakes: reasons of origin and types of earthquakes, seismic waves, characteristics of earthquake soil movement, earthquake registration, intensity of seismic action and seismic scales. Analysis of structure behaviour in earthquake action: constrained damped model vibrations due to dynamic foundation movement, response spectre methods, modal analysis. Designing seismically resistant structures: basic objectives and demands for seismic protection, design methodology, measures for decreasing seismic risk. Designing according to contemporary regulative: design requirements and criteria for buildings, bridges, support structures and other engineering facilities			
Required Reading: Relevant literature in English TBD			
Weekly Contact Hours: 4	Lectures: 2	Practical work: 0	
Teaching Methods: Lectures, numerical and graphic practice, tutorials. Practice is performed in groups using the programme that completely following the course content. Prerequisite for taking the examination are positively graded individual papers and the demanded success at partial examination or a defended seminar paper.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation		written exam	
Practical work		oral exam	
Preliminary exam(s)		
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			