Course Unit Descriptor

Study Programme: Civil Engineering			
Course Unit Title: Masonry Structures			
Course Unit Code: GG411			
Name of Lecturer(s): Vladimir Vukobratović			
Type and Level of Studies: Bachelor Level			
Course Status (compulsory/elective): elective			
Semester (winter/summer): summer			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 3			
Prerequisites: None			
Course Aims: Acquiring advanced academic and professional knowledge in the field of the design and detailing of masonry structures according to limit states and enabling students to design and detail masonry sections and members in building structures of various purposes.			
Learning Outcomes: Students possess advanced academic and professional knowledge in the field of the design and detailing of masonry structures according to limit states. They are able to solve problems of different levels of complexity on their own, as well as in communication and interaction with others. They are entrepreneurial and can lead projects of different complexity by respecting the ethical standards of their profession. They have a positive attitude towards lifelong learning and personal and professional development.			
Syllabus: Masonry materials and their mechanical properties. Mechanical properties of the wall. Types of masonry members and structures. Basic principles of design of masonry structures. Analysis of masonry members and structures: imperfections, second order effects, vertical, concentrated, shear and lateral loading of walls. Basics of design of masonry structures according to limit states. Ultimate and serviceability limit states of unreinforced, reinforced and prestressed walls and confined walls. Simplified methods of analysis. Structural detailing of masonry structures. Inter-storey slabs and lintels. Basement masonry walls. Masonry infilled concrete frames. Retrofitting and strengthening of masonry structures.			
Required Reading: Relevant literature in English			
Weekly Contact Hours:	**Lectures: 2**	**Practical work: 2**	
Teaching Methods: Lectures, practical classes, consultations. The theoretical part of the study material is presented at lectures through presentations of individual thematic units, followed by the appropriate examples from engineering practice for the sake of easier perceiving and understanding. At practical classes, the study material is processed through the solving of practical problems with the active participation of students. In addition to lectures and exercises, consultations are held regularly in order to provide students with answers to additional questions related to the study material.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Group assignment	50	Examination Assignment	50
Exercises			
Test			

Test			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			