

Study programme(s): Computer Science				
Level: bachelor				
Course title: Computer Organisation				
Lecturer: Milan F. Vidakovic				
Status: obligatory				
ECTS: 7				
Requirements: none				
Learning objectives Acquiring basic knowledge and skills in digital electronic components and computer hardware, as well as in low level programming languages.				
Learning outcomes <i>Minimum:</i> a student will be able to comprehend basic principles of digital electronic components and computer organisation and architecture. <i>Desirable:</i> a student will be able to understand advanced component architectures, advanced computer architectures, and multiprocessor architectures.				
Syllabus <i>Theoretical instruction</i> Computer. Computer organisation and functioning. System and application software. Numbers. Boolean algebra. Computer arithmetics. Hardware implementation of boolean functions. Processor. Memory. Cache memory. Bus. Input-output subsystem. Peripherals. <i>Practical instruction</i> Modern processors and organisation. Machine language and assembler programming. Using assembler, linker and debugger. Combinatory and sequential circuits simulation.				
Literature <i>Recomended</i> 1. William Stallings, Organizacija i arhitektura racunara: Projeekat u funkciji performansi, prevod sedmog izdanja, CET, 2006.				
Weekly teaching load				
Lectures: 2	Exercises: 1	Practical Exercises: 1	Student research: 0	Other: 0
Teaching methodology Lectures are presented using classical teaching methods and supported by beamer presentations. Exercises are used to practice and analyse low level programming as well as to demonstrate and practice digital circuits using a simulator. The ability of application of theoretical knowledge is checked through independent solving of exercises on one colloquia and three projects. The final exam is oral and a student is supposed to demonstrate general understanding of the presented theoretical material.				
Grading method (maximal number of points 100)				
Pre-exam obligations	points	Final exam	points	
Colloquia	60	Oral exam	40	