

Study program: Civil Engineering			
Course: Computer Architecture			
Professor/Assistant: PhD Zoran Milivojević / Nemanja Petrović			
Status of course: compulsory			
ECTS credits: 5			
Pre-requisites: none			
Aims of the course:			
<ul style="list-style-type: none"> - understand the importance of using computers, - understand the basic computer architecture. 			
Learning outcomes:			
As the outcome of the course, students will adopt basic computer knowledge and be able to further study computer architecture, informatics and programming.			
Syllabus:			
<u>Theoretical part</u>			
The history of computer systems. Number systems. Decimal, binary and hexadecimal number systems. Converting numbers to other number systems. Boolean complement. Basic arithmetic operations. Boolean algebra. Definition of the Boolean algebra. Rules and axioms of the Boolean algebra. De Morgan theorem. Basic logic operations. Digital logic. Digital circuits. Minimization of the digital circuits. Simplification of the digital circuits. Minimization. Microprocessors. The architecture of the microprocessors. Microprocessors performance measurement. Microprocessor systems. Address bus. Data path. Control bus. Memory. RAM, ROM, BIOS. Peripherals. Floppy disk. Hard drive. Parallel ports. Printers. Serial ports. Modems. Monitors.			
<u>Practical part</u>			
Combination of the theoretical approach with practical examples from civil engineering.			
Literature:			
<ol style="list-style-type: none"> 1. Lazic, B., <i>Osnovi računarske tehnike</i>, Akademski misao, Belgrade, 2006. 2. Mihajlovic, H., Milosevic, B. <i>Računarska tehnika i programiranje</i>, VTŠ, Niš, 2002. 			
Number of active classes			Other forms of teaching:
Lectures: 2	Practical classes: 2	Laboratory classes: 0	
Teaching methods:			
The combination of the theoretical approach with practical examples from civil engineering.			
Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
Pre-commitments	points	Final exam	points
activity during lectures	10	written exam	-
activity during practices	20	oral exam	30
colloquium(s)	20 + 20		
Sum	70	Sum	30