Study program / course: Mechanical engineering	
Type and level of study: Bachelor academic studies	
Course: Computer system architecture	
Lecturers: Radulović J. Jasna	
Status of course: Obligatory for module M_7, V semester	
Number of ECTS: 6	
Precondition: None	

The objective of course

Students are introduced to the structure and function of computer systems. Also, they learn about programming microcontrollers using assembly language.

The outcome of course

Students are introduced to the structure and function of main computer system components: processor, memory system, bus interconnection, input/output system devices.

Syllabus

Theoretical study

Number systems. Elements of Boolean algebra. Basis of digital electronics. Structure of computer systems. Data and instructions. Structure of processor. Memory. Input/output system. Bus interconnection. Computer network. Microcontroller organization and architecture.

Practical classes

Students are instructed for microcontroller organization and architecture and for programming on microcontroller using assembly language.

Recommended reading

1. Lectures available at CD in form of script by lecturer Jasna Radulovic.
2. Stanković, S., Laković R., *Elektronika*, Faculty of Electrical Engineering, Podgorica, 1999.

Additional reading

1. Patterson, D., Hennessy, J., *Computer Organisation and Design*, Morgan Kaufmann Publishers Inc. San Francisco, California, USA, 1996.
2. Stallings, NJ., *Computer Organization and Architecture*, Prentice Hall, Englewood Cliffs, New Jersey, USA, 1996.

The number of hours of active teaching:				Other classes: 1
Theory: 3	Practical classes: 1.6	Other forms of teaching: 0.4	Research study: 0	

Methods of teaching

Lectures, auditory exercises, laboratory exercises.

Evaluation of knowledge			
Pre-final exam obligations	**points**	**Final exam**	**points**
Activities during the classes:	**10**	Oral exam:	**30**
Practical classes:	**25**		
Colloquiums(s) :	**35**		
Seminar(s) :			