

Study program / course: Mechanical engineering			
Type and level of study: Bachelor academic studies			
Course: Electronics			
Lecturers: Radulović J. Jasna			
Status of course: Elective for module M₅, VI semester			
Number of ECTS: 6			
Precondition: No			
The objective of course Introduction to the basic principles of analog and digital electronic components and systems. The selection and application of electronic components and electronic devices in the implementation of different control and measuring technical systems.			
The outcome of course This course will give students an comprehension of : • characteristics and ways of functioning analog and digital electronic components and devices, • making the appropriate selection of components for different applications, • functioning of the basic electronic devices in the electrical scheme, • possibilities of application of complex electronic circuits for solving various technical problems.			
Syllabus Theoretical study Electric and electronic components. Electronic amplifiers. Modulation. Voltage stabilizers, filters, converters, inverters. Combinational and sequential digital systems. D/A and A/D converters. Microcomputers, microprocessors and microcontrollers.			
Practical classes Electronic amplifiers; Multivibrators; D/A and A/D converters; Microcontrollers.			
Recommended reading 1. Radulović, J.J.: "Electric technique with electronic – Laboratory practicum exercises ", 115 pages, ISBN: 86-80581-83-6, Faculty of Mechanical Engineering from Kragujevac, 2005 2. Radulović, J. J.: " Electric technique with electronic – Collection of examples", 230 pages, ISBN: 86-80581-89-5, Faculty of Mechanical Engineering from Kragujevac, 2006 3. Stanković, S., Laković R., Elektronika, Faculty of Electrical Engineering, Podgorica, 1999 4. Živković, D., Popović, D., Impulse and digital electronics (in Serbian), Faculty of Electrical Engineering, Belgrade, Serbia, 1992			
The number of hours of active teaching:			Other classes:
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:		Final exam:	30
Practical classes:	20		
Colloquiums(s) :	40		
Seminar(s) :	20		