

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Communications and Information Technologies		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Software Tools		
Lecturer (for lectures)		Pronić-Rančić R. Olivera, Marinković D. Zlatica		
Lecturer/associate (for exercises)		Atanasković S. Aleksandar, Dimitrijević Ž. Tijana		
Lecturer/associate (for OFE)		Atanasković S. Aleksandar, Dimitrijević Ž. Tijana		
Number of ECTS	6	Course status (obligatory/elective)	Obligatory	
Prerequisites				
Course				
Training students for work in the software packages MATLAB and LabVIEW.				
Course outcomes				
Student should learn to independently use MATLAB and LabVIEW software packages. Practically, student should learn to start each software package, to define simulation, to start the simulation and to report the results.				
Course outline				
Theoretical teaching				
Mathematical calculations, modeling and simulation, analysis and data processing, graphical presentation of data and the development of algorithms in MATLAB environment. MATLAB fundamentals. Array operations. Script files. Two-dimensional plots. Functions and function files. Programming in MATLAB. Three-dimensional plots. Application of MATLAB in numerical analysis. Symbolic mathematics. Toolboxes. Graphical programming languages for control and automation of measurement equipment. LabView. Fundamentals of graphical programming. Graphical objects. Instruments' control. Acquisition, analysis and presentation of data. Using MATLAB code in graphical environments.				
Practical teaching (exercises, OFE, study and research)				
Auditory exercises. Laboratory exercises on defined problems.				
Textbooks/references				
1	Amos Gilat, MATLAB –an introduction with applications, Fourth Edition, John Wiley & Sons, 2011.			
2	D.M. Etter, D.C. Kuncicky, H. Moore, Introduction to MATLAB®7, Pearson Education, Inc,2004 (Uvod u MATLAB 7, prevod sa engleskog jezika) CET, 2005.			
3	O. Pronić - Rančić, Software tools (in Serbian), 2014.			
4	LabVIEW Operational Manual, National Instruments, http://www.ni.com/pdf/manuals/320999e.pdf			
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	1	2	0	0
Teaching methods				
Lectures. Auditory exercises. Laboratory exercises. Consultations.				
Grade (maximum number of points 100)				
Pre-exam duties		Points	Final exam	Points
Activity during lectures		5	Written exam	20
Exercises		15	Oral exam	20
Colloquia		40		
Projects				