

## Specification for the book of courses

<b>Study program</b>		Electrical Engineering and Computer Science		
<b>Module</b>		Electronics - Multimedia technologies		
<b>Type and level of studies</b>		Undergraduate Academic Studies		
<b>The name of the course</b>		Multimedia Systems		
<b>Lecturer (for lectures)</b>		Nikolić V. Saša		
<b>Lecturer/associate (for exercises)</b>		Cvetković S. Stevica		
<b>Lecturer/associate (for OFE)</b>		Cvetković S. Stevica		
<b>Number of ECTS</b>	6	<b>Course status (obligatory/elective)</b>	Obligatory	
<b>Prerequisites</b>				
Transfer the theoretical and practical knowledge of the basic concepts of multimedia systems. Analyze the processes of creation, compression, presentation and multimedia processing. Detailed explanation of the most important compression algorithms for image, video and audio.				
<b>Course objectives</b>				
Knowledge of the basic concepts of creation, compression, processing and presentation of multimedia information. Understanding the algorithm of image compression and compression of video and audio signals.				
<b>Course outcomes</b>				
<b>Course outline</b>				
<b>Theoretical teaching</b>				
Multimedia data and multimedia systems. Digital data acquisition, sampling and quantization. Media representation and media formats. Color theory. Multimedia authoring. Multimedia compression. Media compression: Images. Media compression: Video. Media compression: Audio.				
<b>Practical teaching (exercises, OFE, study and research)</b>				
Exercises on the computer in the MATLAB. Practical implementation of the compression algorithm.				
<b>Textbooks/references</b>				
1	P. Havaladar, G. Medioni: Multimedia systems, 2010 Course Technology, Cengage Learning			
2	Shi Yun Q. Image and video compression for multimedia engineering, CRC Press, 2008.			
3				
4				
5				
<b>Number of classes of active education per week during semester/trimester/year</b>				
<b>Lectures</b>	<b>Exercises</b>	<b>OFE</b>	<b>Study and research work</b>	<b>Other classes</b>
2	2	1	0	0
<b>Teaching methods</b>				
Exercises in the Matlab software package. Practical implementation of compression algorithms.				
<b>Grade (maximum number of points 100)</b>				
<b>Pre-exam duties</b>		<b>Points</b>	<b>Final exam</b>	<b>Points</b>
<b>Activity during lectures</b>		5	<b>Written exam</b>	30
<b>Exercises</b>		5	<b>Oral exam</b>	30
<b>Colloquia</b>		20		
<b>Projects</b>		10		