

## Specification for the book of courses

<b>Study program</b>		Electrical Engineering and Computer Science		
<b>Module</b>		Common		
<b>Type and level of studies</b>		Doctoral studies		
<b>The name of the course</b>		Digital Telecommunications		
<b>Lecturer (for lectures)</b>		Perić H. Zoran		
<b>Lecturer/associate (for exercises)</b>				
<b>Lecturer/associate (for OFE)</b>				
<b>Number of ECTS</b>	10	<b>Course status (obligatory/elective)</b>	Elective	
<b>Prerequisites</b>				
<b>Course objectives</b>	Acquiring theoretical knowledge, getting acquainted with the latest achievements and research in the field of digital telecommunications			
<b>Course outcomes</b>	Extended theoretical knowledge in the field of digital telecommunications. Ability to solve problems in the study area.			
<b>Course outline</b>				
<b>Theoretical teaching</b>	Adaptive scalar quantization. Adaptive Pulse-code modulation. Adaptive differential Pulse-code modulation. Adaptive Delta modulation. Coding with delayed decision making. Subband coding. Channel capacity and coding. Channel coding. Scalar and vector quantization. Transform coding. Audio and speech signal compression. Video signal compression.			
<b>Practical teaching (exercises, OFE, study and research)</b>	Lectures.Consultations.Study and research work.			
<b>Textbooks/references</b>				
	1	Z. Perić, Osnove vektorske kvantizacije, monografija, Elektronski fakultet u Nišu, 2005		
	2	J. Proakis, M. Salehi, Digital Communications, McGraw-Hill Education, 5th edition, 2007.		
	3	N.S. Jayant, P. Noll, Digital Coding of Waveforms, Prentice-Hall, New Jersey, 1984.Publishers, 1992.		
	4	M.Safak, Digital Communications,Wiley, 1st edition, 2017		
	5	Z. Perić, A. Jovanović, Geometrijska vektorska kvantizacija, monografija, Elektronski fakultet u Nišu, 2010.		
<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>
3	0	0	0	0
<b>Teaching methods</b>	Lectures. Project work. Consultations.			
<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>		<b>Written exam</b>		
<b>Exercises</b>		<b>Oral exam</b>	50	
<b>Colloquia</b>				
<b>Projects</b>	50			