

## 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>		Influence of Radiation on Microelectronic Devices		
<b>Lecturer (for lectures)</b>		Golubović M. Snežana		
<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>	Gaining knowledge about the types of radiation and their effects on microelectronic components.			
<b>Course outcomes</b>	Knowing the effects of radiation, with special emphasis on the effects of gamma radiation in microelectronic devices and their annealing.			
<b>Course outline</b>				
<b>Theoretical teaching</b>	Properties of gamma and neutron radiation. Defects caused by radiation in microelectronic devices. The impact of radiation on the electrical characteristics of microelectronic devices. Mechanisms of instability characteristics in microelectronic devices. Annealing of defects.			
<b>Practical teaching (exercises, OFE, study and research)</b>	Seminar work			
<b>Textbooks/references</b>				
1	S. Golubovic, S. Djoric Veljkovic, I. Manic, V. Davidovic, Stress effects in gate oxide of power VDMOS transistors (monography), Faculty of electronics, University of Nis, 2006. (in Serbian)			
2	R.D. Scrimpf, D.M. Fleetwood (editors), Radiation effects and soft errors in integrated circuits and electronic devices, Vanderbilt University, USA, 2004.			
3	S. Golubovic, Analysis of creation and annealing of radiation effects in MOS transistors, Doctoral thesis, Faculty of electronics, University of Nis, 1995. (in Serbian).			
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>
3	0	0	0	0
<b>Teaching methods</b>	Presentation on a given topic.			
<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		