

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Common		
Type and level of studies		Doctoral studies		
The name of the course		Solid State Physics		
Lecturer (for lectures)		Ristić S. Goran		
Lecturer/associate (for exercises)				
Lecturer/associate (for OFE)				
Number of ECTS	10	Course status (obligatory/elective)	Elective	
Prerequisites				
Course objectives	Introducing students to basic processes in solid states, including conductors, semiconductors and dielectrics.			
Course outcomes	Mastering the theoretical knowledge related to the structure and properties of solid states, as well as the transport of charge carriers			
Course outline				
Theoretical teaching	Theoretical lectures will take place in the following areas: Physical characteristics and classification of solid states, crystal lattices, interatomic connections, zonal theory of solid states, electronic states in a periodic crystal, thermal motion of the crystal lattice, transport and optical characteristics, properties of dielectrics. Semiconductors, electronic transport processes, diffusion and recombination processes. Magnetic properties of solid bodies. Superconductivity.			
Practical teaching (exercises, OFE, study and research)				
Textbooks/references				
1	D. Tjapkin, Physical electronics and solid-state electronics, ETF, Belgrade, 1994 (in Serbian)			
2	C. Kittel, Introduction to Solid State Physics, John Wiley & Sons, 1976			
3	N. Ashcroft, N. Mermin, Solid state physics, Harcourt College Publishing, NY, 1978			
4				
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
3	0	0	0	0
Teaching methods	Presentations on specific topics, seminars and projects			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam		Points
Activity during lectures		Written exam		
Exercises		Oral exam		60
Colloquia	40			
Projects				