

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		Wireless Communications		
Lecturer (for lectures)		Marković V. Vera, Stanković Ž. Zoran		
Lecturer/associate (for exercises)				
Lecturer/associate (for OFE)				
Number of ECTS	10	Course status (obligatory/elective)	Elective	
Prerequisites				
Course objectives				
Deepening of knowledge related to the concept, architecture and functioning of modern wireless communication systems and learning about methods for solving problems in selected areas.				
Course outcomes				
Knowledge of the important aspects of modern wireless communications. Ability to apply specific techniques, methods, and models for analyzing and/or designing in the field of wireless communication systems.				
Course outline				
Theoretical teaching				
Overview of microwave wireless communication systems. Advanced wireless services. Propagation models in the RF and microwave frequency range. Selected topics in the field of fixed and mobile communication systems. Wireless communication systems architecture and design of RF components and subsystems for wireless communications. Methods for the characterization of non-ionizing radiation levels of wireless systems and the biological effects of radiation.				
Practical teaching (exercises, OFE, study and research)				
Insight into selected literature. Examining a specific problem. Independent research work.				
Textbooks/references				
1	D.P.Agrawal, Q.A.Zeng, Introduction to Wireless and Mobile Systems, Thomson, 2006			
2	T. Novosad, Radio Network Planning and Optimisation for UMTS, John Wiley & Sons, 2006			
3	A. Osseiran, J. Monserrat, P. Marsch, 5G Mobile and Wireless Communications Technology, Cambridge University Press, 2016.			
4	Selected scientific publications			
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, seminar work and students' projects				
Grade (maximum number of points 100)				
Pre-exam duties		Points	Final exam	Points
Activity during lectures			Written exam	
Exercises			Oral exam	50
Colloquia				
Projects		50		