

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		Advanced Modeling Techniques for RF Applications		
Lecturer (for lectures)		Marković V. Vera, Marinković D. Zlatica		
Lecturer/associate (for exercises)				
Lecturer/associate (for OFE)				
Number of ECTS	10	Course status (obligatory/elective)	Elective	
Prerequisites				
Course objectives	Acquiring the knowledge in the field of modern methods for modeling RF and microwave components, devices, subsystems and systems			
Course outcomes	Ability to use modern techniques for modeling in the field of RF frequencies. Ability to develop models of components, devices, or certain parameters / aspects of selected RF communication systems			
Course outline				
Theoretical teaching	Theoretical aspects of a modeling process as an integral part of the design process. Review of the most frequently used modeling techniques for RF applications. Introduction to the selected modeling techniques. Modeling components and devices for applications in RF and microwave communications. Modeling the propagation of mobile communication systems. Application of artificial neural networks for modeling RF and microwave communications. Model development in a selected field.			
Practical teaching (exercises, OFE, study and research)	Independent research (literature review, analysis of specific problems and model development, writing and presentation of scientific work).			
Textbooks/references				
1	Scientific publications in a selected area			
2	Q. J. Zhang, K. C. Gupta, Neural Networks for RF and Microwave Design, Artech House, 2000.			
3				
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	Lectures; independent research work; consultations. (Note: publishing a scientific paper in a journal or a presentation at a conference replaces the oral part of the exam.)			
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		