

Specification for the book of courses

Study program		Communications and Information Technologies		
Module		System Engineering and Radio-Communications		
Type and level of studies		Master studies		
The name of the course		Electromagnetic Compatibility		
Lecturer (for lectures)		Dončov S. Nebojša, Stanković Ž. Zoran		
Lecturer/associate (for exercises)		Joković J. Jugoslav		
Lecturer/associate (for OFE)				
Number of ECTS	4	Course status (obligatory/elective)	Elective	
Prerequisites				
Introduce students to the basic terms and concepts of electromagnetic compatibility (EMC), practical EMC problems and techniques and procedures to solve them. Acquisition of fundamental knowledge of the methods for designing circuits and devices that ensure the fulfillment of EMC standards.				
Course objectives				
Understanding the principles and techniques of electromagnetic compatibility. Ability to solve EMC problems by using electromagnetic simulations on computer and to perform EMC measurements. Ability to design circuits and devices that meet EMC standards.				
Course outcomes				
Understanding the principles and techniques of electromagnetic compatibility. Ability to solve EMC problems by using electromagnetic simulations on computer and to perform EMC measurements. Ability to design circuits and devices that meet EMC standards.				
Course outline				
Introduction to electromagnetic compatibility. Sources of electromagnetic interference. Penetration through shields and apertures. Shielding theory. Aperture theory. Propagation, conductive penetrations and general multipath coupling. Electromagnetic susceptibility. Signal integrity. Electromagnetic interference control techniques. Basic principles of EMC design. Review of numerical simulation techniques for solving EMC problems on computer. EMC standards. EMC measurement methods.				
Theoretical teaching				
Auditory exercises. Practical work with software tools for EMC problem solving. EMC measurements in laboratory.				
Practical teaching (exercises, OFE, study and research)				
Textbooks/references				
1	Christos Christopoulos, Principles and Techniques of Electromagnetic Compatibility, 2nd edition, CRC Press, 2007.			
2	Clayton R. Paul, Introduction to Electromagnetic Compatibility, John Wiley & Sons, 2006.			
3	Antonije Đorđević, Dragan Olčan, Testing of electromagnetic compatibility (in Serbian), Academic mind, Belgrade, 2012.			
4				
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	1	0	0	0
Teaching methods				
Lectures, auditory exercises, laboratory work, numerical simulations on computer, consultations, project.				
Grade (maximum number of points 100)				
Pre-exam duties		Points	Final exam	Points
Activity during lectures		5	Written exam	30
Exercises		35	Oral exam	
Colloquia				
Projects		30		