

The Name of Institution:

*School of Electrical Engineering,
University of Belgrade*

<i>Description of an Individual Course Unit</i>							
Course Code:		Level of Course:	Undergraduate	ECTS	6	Semester:	8
Course Title:	Electromagnetic Compatibility			Year of Study:		4	
Prerequisites:	None			Type of course:		Mandatory / Elective	
Lecturer(s):	Dr. Antonije Đorđević						
Course Staff:							
Objective of the course:	<ul style="list-style-type: none"> ✓ Introduction to problems of electromagnetic compatibility (EMC) that are encountered in practice, as well as engineering solutions to these problems. ✓ Training for computer simulation of circuits and devices with respect to EMC. ✓ Mastering methods for designing circuits and devices that satisfy EMC requirements. ✓ Training for experimental testing of devices with respect to EMC requirements. 						
Course Contents:	<p>Introduction. Electromagnetic environment and compatibility. Scope and definitions.</p> <p>Causes of electromagnetic interference. Natural sources and man-made sources of EMI. Lightning strokes. Electrostatic discharges. Nuclear electromagnetic pulse. Conducted interference. Radiated interference. Tempest.</p> <p>Interference coupling. Internal and external EMC problems. Electromagnetic susceptibility. Signal integrity.</p> <p>Hardening. Grounding and bonding. Shielding. Parasitic resonances. Filtering. Cables, connectors, and components. Design practice.</p> <p>EMC computer simulation.</p> <p>Regulations and standards.</p> <p>EMC test procedures. Measurement methods. Measurement of conducted and radiated interference. Measurements of interference immunity. Measurement equipment. Test sites.</p>						
Teaching Methods:	45 hours of lectures + 15 hours of supervised problem classes + 15 hours of laboratory work, homework, and midterm test. Approximately 60 hours of personal study and exercise (3 hours per week during semester, and approximately 15 hours of preparation during exam term).						
Literature:	A. Đorđević, <i>Electromagnetics for Computer Engineering</i> , Academic Mind, 2001 (in Serbian). T. Williams, <i>EMC for Product Designers</i> , Newness, Oxford, UK, 2001.						
Assessment methods:	<p>Activities – maximum 80 points, clipped at 70 points: Homework – Two assignments, 10 points each. Tests – Six tests in classes, 10 points each.</p> <p>Final Exam – Duration 2 hours, maximum 40 points, clipped at 30 points. Final grade – The total score is calculated by summing the score achieved for the course activities and the score achieved at the final exam. To pass the course, at least 51 points must be achieved. The grades 6-10 are evenly distributed in the range from 51 to 100 points.</p>						
Language of instruction:	Serbian	Date:	20.03.2007.	Signature:			