

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Control Systems		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Measurement of Electrical Power Quality		
Lecturer (for lectures)		Simić M. Milan		
Lecturer/associate (for exercises)		Jocić V. Aleksandar, Đorđević-Kozarov R. Jelena		
Lecturer/associate (for OFE)		Jocić V. Aleksandar, Đorđević-Kozarov R. Jelena		
Number of ECTS		5	Course status (obligatory/elective)	Elective
Prerequisites	No			
Course objectives	Education and introduction of students with basic theoretical and practical aspects of electrical power quality measurement.			
Course outcomes	Training and capability of students for solving the practical problems in the field of electrical power quality measurement, on the basis of good knowing the measurement methods and techniques, with proper use of modern devices and equipment for measurement of electrical power quality.			
Course outline				
Theoretical teaching	Definition of electrical power quality term. Basic measuring parameters and electrical power quality disturbances. Standards for measurement of electrical power quality. Measuring devices and equipment for measurement of electrical power quality. Methods and techniques for measurement of electrical power quality parameters. Methods and equipment for testing the devices for measurement of electrical power quality. Solutions of acquisition system for testing the devices for measurement of electrical power quality, based on using of virtual instrumentation and LabVIEW software.			
Practical teaching (exercises, OFE, study and research)	Laboratory and demonstration exercises: training of students for practical use of measurement methods and devices for measurement of electrical power quality parameters, through engagement on laboratory and demonstration exercises. According to the instruction manual for work on laboratory exercises, students submit appropriate report about each completed laboratory exercise.			
Textbooks/references				
1	Ewald F. Fuchs, Mohammad A.S. Masoum, "Power quality in power systems and electrical machines", Elsevier Inc., 2008.			
2	Roger C. Dugan, Mark F. McGranaghan, Surya Santoso, H. Wayne Beaty, "Electrical power systems quality, Second Edition", McGraw-Hill, 2003.			
3	C. Sankaran, "Power quality", CRC Press, LLC, New York, 2002.			
4	Barry W. Kennedy, "Power quality primer", McGraw-Hill, 2000.			
5	S. Tumanski, "Principles of Electrical Measurements", Taylor & Francis Group, 2006.			
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	2	1	0	0
Teaching methods	Lectures (theoretical teaching) with graphical presentation of material in the form of slides. Practical teaching in the form of laboratory and demonstration exercises. Everyday consultations for students with teacher or assistants. Individual work of students in the form of homework tasks and making of seminar papers.			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam		Points
Activity during lectures	20	Written exam		20
Exercises	20	Oral exam		20
Colloquia	0			
Projects	20			