

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		Measurements in Medicine		
Lecturer (for lectures)		Radenković N. Dragan		
Lecturer/associate (for exercises)		Đorđević-Kozarov R. Jelena		
Lecturer/associate (for OFE)		Đorđević-Kozarov R. Jelena, Stojković S. Ivana		
Number of ECTS	6	Course status (obligatory/elective)	Elective	
Prerequisites				
Course objectives	Mastering the basic knowledge necessary for measurement of the different biomedical quantities on the patient's body.			
Course outcomes	Theoretical knowledge; Mastering the use of appropriate electronic circuits and measurement methods in medicine.			
Course outline				
Theoretical teaching	Electromedical measurement systems and their characteristics. Biopotential amplifiers and isolation amplifiers. Electronic devices for recording and measuring biopotentials (electromyography, electrocardiograph, electroencephalograph, etc.). Measurement of pulse, blood pressure and blood flow. Measurement of other quantities on the human body. Protecting the patient from the effect of electricity.			
Practical teaching (exercises, OFE, study and research)	Practice, laboratory exercises, realization of seminar and project tasks for the purpose of studying and practical implementation of measurement systems in medicine.			
Textbooks/references				
1	D. Radenković, A. Micić, "Electromedical instrumentation", Faculty of Electronic Engineering Niš, 2007 (in Serbian).			
2	John G. Webster, "Medical Instrumentation Application and Design, Second Edition", JOHN WILEY & SONS, 1995.			
3	Joseph Carr, John Brown, "Introduction to Biomedical Equipment Technology", Third Edition, PRENTICE HALL, New Jersey 1998.			
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	2	0	0
Teaching methods	Lectures, practice, laboratory exercises, seminar and project tasks, consultations.			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam	Points	
Activity during lectures	5	Written exam	20	
Exercises	20	Oral exam	30	
Colloquia	25			
Projects				