

Specification for the book of courses

Study program	Control Systems			
Module	Automatic Control			
Type and level of studies	Master studies			
The name of the course	Electromedical Instrumentation			
Lecturer (for lectures)	Radenković N. Dragan			
Lecturer/associate (for exercises)	Dinčić R. Milan			
Lecturer/associate (for OFE)	Jocić V. Aleksandar, Đorđević-Kozarov R. Jelena			
Number of ECTS	5	Course status (obligatory/elective)	Elective	
Prerequisites				
Course objectives	Mastering basic knowledge necessary for understanding the functioning of electromedical instruments.			
Course outcomes	Theoretical and practical knowledge about working principles and structure of appropriate electromedical devices.			
Course outline				
Theoretical teaching	Cell as a source of bioelectric potential. Electrodes for measuring biopotentials. Instruments for registering EMG, ECG and EEG signals. Devices for electrostimulation and electrotherapy. Pacemakers and defibrillators. Instruments for the formation of a medical image based on electromagnetic radiation and on the basis of nuclear magnetic resonance. Other electromedical instruments.			
Practical teaching (exercises, OFE, study and research)	Practice, laboratory exercises, realization of seminar and project tasks for the purpose of studying and practical applications of electromedical instrumentation.			
Textbooks/references				
1	D. Radenković, A. Micić, "Electromedical instrumentation", Faculty of Electronic Engineering Niš, 2007 (in Serbian).			
2	D.Jennings, A.Flint, B.C.H.Turton and L.D.M.Nokes, "Introduction to Medical Electronics Application", EDWARD ARNOLD, London 1995.			
3	David Prutchi, Micahel Norris, "Design and Development of Medical Electronic Instrumentation", JOHN WILEY & SONS, New Jersey 2005.			
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	1		
Teaching methods	Lectures, practice, laboratory exercises, consultations			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam	Points	
Activity during lectures	10	Written exam	25	
Exercises	10	Oral exam	25	
Colloquia	30			
Projects				