

## Specification for the book of courses

<b>Study program</b>		Electrical Engineering and Computer Science		
<b>Module</b>		Communications and Information Technologies - Communications and Information Processing		
<b>Type and level of studies</b>		Undergraduate Academic Studies		
<b>The name of the course</b>		Networks and Protocols		
<b>Lecturer (for lectures)</b>		Nikolić B. Zorica, Milošević D. Nenad		
<b>Lecturer/associate (for exercises)</b>		Anastasov A. Jelena		
<b>Lecturer/associate (for OFE)</b>		Eferica M. Predrag		
<b>Number of ECTS</b>	5	<b>Course status (obligatory/elective)</b>	Obligatory	
<b>Prerequisites</b>				
<b>Course objectives</b>	Learning basic knowledge of the existing telecommunications networks and protocols, and to create a knowledge base for the study of modern telecommunication networks.			
<b>Course outcomes</b>	Theoretical knowledge. Knowledge of telecommunication networks standards.			
<b>Course outline</b>				
<b>Theoretical teaching</b>	Introduction. History of telecommunication networks. Types of networks. The layered architecture. Functions and data link layer protocols and network layer. Examples of multiple access applications in LAN and MAN networks. Routing in telecommunication networks. TCP and IP protocols. Industrial networks. CAN protocol.			
<b>Practical teaching (exercises, OFE, study and research)</b>	Auditory exercises are performed in all thematic areas. Laboratory exercises are performed in the area of data transmission, multiple access protocol and routing.			
<b>Textbooks/references</b>				
1	T. Saadawi, M. Ammar, A. El Hakeem, Fundamentals of Telecommunication Networks, John Wiley&Sons, NY , 1994			
2	D. Bertsekas, R. Gallager, Data Networks, Prentice Hall, 1992, second edition, chapter 4			
3	M. Bjelica, Telecommunication networks – solved problems (in Serbian), Akademska misao, Beograd, 2009			
4				
5				
<b>Number of classes of active education per week during semester/trimester/year</b>				
<b>Lectures</b>	<b>Exercises</b>	<b>OFE</b>	<b>Study and research work</b>	<b>Other classes</b>
2	2	1	0	0
<b>Teaching methods</b>	Giving lectures, auditory and laboratory exercises.			
<b>Grade (maximum number of points 100)</b>				
<b>Pre-exam duties</b>		<b>Points</b>	<b>Final exam</b>	<b>Points</b>
<b>Activity during lectures</b>		10	<b>Written exam</b>	20
<b>Exercises</b>		10	<b>Oral exam</b>	20
<b>Colloquia</b>		40		
<b>Projects</b>				