

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Communications and Information Technologies - Communications and Information Processing		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Security and Protection of Telecommunications Transmission		
Lecturer (for lectures)		Milović M. Daniela, Milić N. Dejan		
Lecturer/associate (for exercises)		Panajotović S. Aleksandra		
Lecturer/associate (for OFE)		Panajotović S. Aleksandra		
Number of ECTS	5	Course status (obligatory/elective)	Obligatory	
Prerequisites				
Course objectives	Introducing basic concepts of protection, reliability, implementation and maintenance of the protection system in telecommunication networks.			
Course outcomes	Students will be able to assess the potential vulnerability and need for protection in telecommunication networks, as well as to design appropriate protection systems.			
Course outline				
Theoretical teaching	Protection of different types of communication networks and information content from the physical to the application level. Techniques of attack. Design of the protection system and its maintenance. Authorized access and authorization systems for public and private telecommunication networks and media. Fundamentals of cryptography - infrastructure of public keys, protocols, techniques and algorithms. Basic Security Protocols in Wireless Networks. Availability and reliability of the optical network.			
Practical teaching (exercises, OFE, study and research)	Auditory and computer exercises.			
Textbooks/references				
1	Communication System Security, L. Chen, G. Gong, CRC Press, 2012			
2	Applied Cryptography, B. Schneier, John Wiley & Sons, 1996			
3	Handbook of Information and Communication Security, P. Stavroulakis, M. Stamp, Springer, 2010			
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	0	0
Teaching methods	Lectures, auditory exercises, homeworks, office hours.			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam	Points	
Activity during lectures	10	Written exam	25	
Exercises	20	Oral exam	15	
Colloquia				
Projects	30			