Specification for the book of courses

Study program			Electrical Engineering and Computer Science	
Module			Communications and Information Technologies - System Engineering and Radio-Communications	
Type and level of studies			Undergraduate Academic Studies	
The name of the course			Cable and Fiber-optic Communication Systems	
Lecturer (for lectures)			Marinković D. Zlatica, Dončov S. Nebojša	
Lecturer/associate (for exercises)			Stošić P. Biljana	
Lecturer/associate (for OFE)			Stošić P. Biljana	
Number of ECTS	6	**Course status (obligatory/elective)**		Obligatory
Prerequisites				
Course objectives	Introduction to structures, elements and operating principles of cable and fiber-optic communication systems.			
Course outcomes	Knowledge about structures of cable and fiber-optic communication systems. Ability to compare different systems and to identify advantages and weaknesses. Understanding operating principles of optoelectronic components.			
Course outline				
Theoretical teaching	History of cable and fiber-optic communication systems' development. Telecommunication cables with metal conductors. Principles of light transmission in optical fibers. Optical Cables. Break detection on optical fibers. Structure of fiber optical communication systems. Optical links. Optical networks. Hybrid fiber-coaxial systems. Structured cabling. Basic principles of design of cable and fiber-optic systems. Design of optical infrastructure for computer networks.			
Practical teaching (exercises, OFE, study and research	Exercises: Examples of calculations in cable and fiber-optic communication systems. Laboratory work: Typical measurements in cable and fiber-optic communication systems. Software packages for design and analysis of cable and fiber-optic communication systems			
Textbooks/references				
1	D. Large, J. Farmer, Broadband Cable Access Networks: The HFC Plant, Morgan Kaufmann, 2008.			
2	V. Aćimović-Raspopović, S. Lazović, Telecomunication systems - optical transport systems (in Serbian), Faculty of Transport, University of Belgrade, 2002.			
3	J. M. Senior, Optical Fiber Communications, Priciples and Practice, Prentice Hall, 2009			
4	A.B. Semenov, S.K. Strizhakov, I.R. Suncheley, Structured Cable Systems, Springer, 2008.			
5	Z. Marinković, B. Stošić, A. Atanasković, N. Dončov, „Collection of solved problems for cable and optoelectronic communication systems (in Serbian)“, Faculty of Electronic Engineering Niš, 2017.			

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; Exercises; Laboratory Exercises; Consultations			

Grade (maximum number of points 100)			
Pre-exam duties	**Points**	**Final exam**	**Points**
Activity during lectures		**Written exam**	40
Exercises		**Oral exam**	20
Colloquia	40		
Projects			