

Specification for the book of courses

Study program		Communications and Information Technologies		
Module		System Engineering and Radio-Communications		
Type and level of studies		Master studies		
The name of the course		Advanced Communication Technologies		
Lecturer (for lectures)		Marinković D. Zlatica, Marković V. Vera, Maleš-Ilić P. Nataša		
Lecturer/associate (for exercises)		Joković J. Jugoslav		
Lecturer/associate (for OFE)				
Number of ECTS		4	Course status (obligatory/elective)	Elective
Prerequisites				
Course objectives		Getting to know the trends in the development of modern communication technologies and systems, system architectures and services based on new technologies.		
Course outcomes		Knowledge about the current state-of-the-art in the development of communication systems and technologies. The ability to use independently literature, to critically examine and compare certain technologies and systems and services		
Course outline				
Theoretical teaching		Theoretical teaching consists of an overview of the latest trends in the development of communication systems and technologies. Selected topics in the field of development of wireless communication systems, cable and optical communication systems, as well as smart systems will be discussed in more details. The current program includes: 5G mobile networks, communication systems in millimeter wave range, the latest generation of optical networks, smart systems and IoT, convergence of communication technologies, etc. The content will be adjusted every year in line with the development of communication systems.		
Practical teaching (exercises, OFE, study and research)		Budget examples related to the discussed communication systems. Practical work with software packages for simulation and analysis of the certain systems. Preparation of seminar paper.		
Textbooks/references				
1	A. Osseiran, J. F. Monserrat, P. Marsch, 5G Mobile and Wireless Communications Technology, University Press 2016.			
2	C. Siu, IoT and Low-Power Wireless: Circuits, Architectures, and Techniques, CRC Press 2018			
3	B. Verma, P. Verma, Advanced Communication Systems, 2nd Edition, KATSON BOOKS, 2014			
4	B. Mukherjee, I. Tomkos, Optical Networks, Springer 2019.			
5	Selected paper published in international journals.			
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	1	0	0	0
Teaching methods		Lectures; Exercises; Seminar project; Consultations.		
Grade (maximum number of points 100)				
Pre-exam duties		Points	Final exam	Points
Activity during lectures			Written exam	20
Exercises			Oral exam	20
Colloquia				
Projects		60		