

## Specification for the book of courses

<b>Study program</b>		Communications and Information Technologies		
<b>Module</b>		System Engineering and Radio-Communications		
<b>Type and level of studies</b>		Master studies		
<b>The name of the course</b>		Computer Communications		
<b>Lecturer (for lectures)</b>		Stanković Ž. Zoran, Dončov S. Nebojša		
<b>Lecturer/associate (for exercises)</b>		Milijić R. Marija		
<b>Lecturer/associate (for OFE)</b>				
<b>Number of ECTS</b>		4	<b>Course status (obligatory/elective)</b>	Elective
<b>Prerequisites</b>				
<b>Course objectives</b>		Acquiring theoretical and practical knowledge related to the use of computers in the realization of network protocols and services as well as modern communication architectures for Internet access.		
<b>Course outcomes</b>		Knowledge of current methods and techniques for establishing communication and reliable data transfer at different levels of OSI and TCP / IP communication model. Knowing the practical realization of various communication protocols and services. Knowledge of the network architectures and basic equipment used in Internet access.		
<b>Course outline</b>				
<b>Theoretical teaching</b>		Computer as a communication device. OSI and TCP / IP communication models. The physical level of data transfer in computer communications. Modern communications and broadband Internet access. Internet PPP protocol. Communication systems based on IEEE 802.3 standard. Ethernet network architecture and devices. IP communications. IPv4 and IPv6. NAT communication infrastructure. RIP and EGP. IP communication infrastructure for Internet access. Devices for realization of Internet access. Transport layer and UDP and TCP communications. RTP and transfer of multimedia data. Application layer in telecommunications for Internet access. Modern telecommunication services and the Internet.		
<b>Practical teaching (exercises, OFE, study and research)</b>		Auditory exercises: Solving practical problems related to data transmission between communication devices at different levels of OSI and TCP/IP communication models and in the Internet environment. Working with simulators of the network communication environment.		
<b>Textbooks/references</b>				
1	V. Stallins, Data & Computer Communications, 10th edition, Pearson Education Limited, 2013.			
2	D. Comer, Internetworking with TCP/IP, CET Biblioteka, 2001.			
3	A. Tanenbaum, D. Wetherall, Computer Networks, 5th edition, Mikro knjiga, 2013.			
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	1	0	0	0
<b>Teaching methods</b>		Lectures, auditory exercises with practical computer work, consultations, homework.		
<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>		5	<b>Written exam</b>	20
<b>Exercises</b>		15	<b>Oral exam</b>	20
<b>Colloquia</b>		40		
<b>Projects</b>				