

## Specification for the book of courses

<b>Study program</b>		Electrical Engineering and Computer Science		
<b>Module</b>		Common		
<b>Type and level of studies</b>		Doctoral studies		
<b>The name of the course</b>		5G and 6G Mobile Communications		
<b>Lecturer (for lectures)</b>		Milošević D. Nenad		
<b>Lecturer/associate (for exercises)</b>				
<b>Lecturer/associate (for OFE)</b>				
<b>Number of ECTS</b>	10	<b>Course status (obligatory/elective)</b>	Elective	
<b>Prerequisites</b>				
<b>Course objectives</b>	Introduction to the technologies that the future mobile communication networks will be based on, including software defined networks, network function virtualization and cognitive networks.			
<b>Course outcomes</b>	Understanding operating principles and analysis of cognitive communication networks, software defined networks, i.e. modern communication networks.			
<b>Course outline</b>				
<b>Theoretical teaching</b>	Modern mobile networks and development perspectives. General concept of the next generation networks. Adaptive network layer. Mobility management. Multi-hop cellular networks. Cognitive networks. Access point choice. Network optimization theory. Multi-operator spectrum sharing. Mobile networks and cloud computing.			
<b>Practical teaching (exercises, OFE, study and research)</b>	Solving theoretical and practical problems in the form of seminar papers.			
<b>Textbooks/references</b>				
1	S. Glisic, Advanced wireless networks: technology and business models, Wiley, 2016			
2	G. Stüber, Principles of Mobile Communication, Springer International Publishing, 2017			
3	Y. Zaki, Future Mobile Communications: LTE Optimization and Mobile Network Virtualization, Vieweg+Teubner Verlag, 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>
3	0	0	0	0
<b>Teaching methods</b>	Teaching. Individual work with students. During study and research work.			
<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>			<b>Written exam</b>	
<b>Exercises</b>			<b>Oral exam</b>	50
<b>Colloquia</b>				
<b>Projects</b>		50		