

1.	Course Title	Wireless Multimedia Systems		
2.	Code	F18L3S077		
3.	Study program	Software engineering and information systems		
4.	Study Program Organizer	Faculty of Computer Science and Engineering		
5.	Degree (first, second, third cycle)	first cycle		
6.	Academic year / semester 3 / summer / optional	7. ECTS credits 6		
8.	Teacher	assistant professor Milosh Jovanovikj		
9.	Course enrollment prerequisites	Безжични мобилни системи		
10.	Course program goals (competencies): Understanding the issues arising from transferring multimedia over wireless and mobile networks. Getting familiar with the concepts of design, analysis and implementation of wireless and mobile multimedia systems. Learning multimedia coding techniques, multimedia transport protocols in wireless networks, multimedia control protocols in wireless networks. Learning multimedia traffic specifics. Being able to practically provide multimedia application QoS for wireless mobile devices.			
11.	Course program content: (1) Overview of advanced trends in wireless communication (1) Overview of multimedia coding techniques, multimedia transport and control protocols (2) Digital TV (2) Mesh, Relay and Interworking networks (2) Wireless video streaming (2) Green communications in home wireless multimedia networks (2) Congestion control protocol for wireless multimedia networks (2) Wireless multimedia networks with cognitive radio (1) Wireless multimedia sensor networks			
12.	Learning methods: Lectures using presentations, interactive lectures, exercises (using equipment and software packages), teamwork, case studies, invited guest lecturers, independent preparation and defense of a project assignment and seminar work.			
13.	Total available time	6 ECTS x 30 hours = 180 hours		
14.	Distribution of the available time	30 + 45 + 15 + 15 + 75 = 180 hours		
15.	Teaching activity forms	15.1.	Lectures – theoretical teaching	30 hours

		15.2.	Exercises (laboratory, auditory), seminar papers, teamwork	45 hours
16.	Other activity forms	16.1.	Project Tasks	15 hours
		16.2.	Independent Learning Tasks	15 hours
		16.3.	Home learning	75 hours
17.	Assessment methodology			
	17.1.	Tests		10 points
	17.2.	Seminar paper/project (presentation: written and oral)		10 points
	17.3.	Activity and learning		10 points
	17.4.	Final exam		70 points
18.	Assessment criteria (points/grade)	up to 50 points		5 (five) (F)
		51 to 60 points		6 (six) (E)
		61 to 70 points		7 (seven) (D)
		71 to 80 points		8 (eight) (C)
		81 to 90 points		9 (nine) (B)
		91 to 100 points		10 (ten) (A)
19.	Course completion and final exam requirements	Realized activities 15.1 and 15.2		
20.	Teaching Language	Macedonian and English		
21.	Teaching quality evaluation method	Internal evaluation mechanisms and questionnaires		
22.	Course Material			
	22.1.	Mandatory course material		

No	Author	Title	Publisher	Year
1	Benny Bing	Broadband Wireless Multimedia Networks	Wiley	2013
2	K.R. Rao, Zoran S. Bojkovic, Bojan M. Bakmaz	Wireless Multimedia Communication Systems	CRC Press	2014
3	Savo Glisic	Advanced Wireless Networks: Technology and Business Models (3rd Edition)	Wiley	2016
22.2. Additional course material				
No.	Author	Title	Publisher	Year