

1.	Course Title	Mobile platforms and programming		
2.	Code	F18L3W129		
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 4 / winter / optional	7. ECTS credits 6		
8.	Teacher	full professor Ljupcho Antovski, full professor Dimitar Trajanov, associate professor Igor Mishkovski		
9.	Course enrollment prerequisites	Алгоритми и податочни структури		
10.	Course program goals (competencies): After the successful completion of the course, the student will understand and be able to deploy knowledge of mobile operating systems, native mobile application programming and mobile web programming.			
11.	Course program content: Course content: Mobile Operating Systems. Native and web mobile applications: conceptual differences and development approaches. Mobile applications development concepts with focus on mobility. Mobile infrastructures: mobility vs. wireless. Mobile applications features (multimodal interaction, communications channels, infrastructure limitations). Mobile applications user interfaces and interactions. Mobile users (difficulty to focus, multicultural behaviour influence). User centric methods and tools for Mobile application development. Mobile development platforms and technologies.			
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			0 points	
	17.2.	Seminar paper/project (presentation: written and oral)			20 points	
	17.3.	Activity and learning			15 points	
	17.4.	Final exam			65 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	Annuzzi, Darcey & Conder	Introduction to Android Application Development: Android Essentials, 5th Edition	Addison-Wesley Professional	2017
		2	Wickham, Mark	Practical Android	Apress	2017
		3	Reto Meier	Professional Android, 4th Edition	Wrox	2018
	22.2.	Additional course material				
		No.	Author	Title	Publisher	Year

