1.	Course		*Advanced Mobile Information Systems*	
2.	Code		KNI_E15	
3.	Study programme		Computer Science and Engineering PhD study programme	
4.	Study programme organized by		FCSE	
5.	Cycle		Third – PhD	
6.	Academic year / semester winter/summer/elective		7. ECTS credits 7,5	
8.	Teacher		Prof. d-r Vladimir Trajkovikj, Prof. d-r Danco Davcev	
9.	Prerequisites		None	
10.	Course programme goals (competences): The students will have the knowledge to employ various techniques for analysis, design and implementation of mobile information systems.			
11.	Course syllabus: The fast and recent development of wireless technologies has brought to the so-called mobile computing, new dimensions in the data communication and their processing. A new big and rapidly growing market with millions of mobile users that carry with them small battery powered wireless devices has been created, and thus, as a result, a radical transformation of the way people use information resource follows. The course will setup the basics for modeling, analysis and design of mobile information systems, as well as mobile applications in the mobile cloud. Data managements, data fusion and knowledge managements in distributed mobile and other environments will be studied in great detail. The basic elements for mobile information systems and computing are the intelligent user-computer interfaces and their adaptability to the user needs. Sensor networks as a part of the ubiquitous services and computing will also be reviewed.			
12.	Teaching methods: Classes supported with slide presentations, interactive teaching, lab equipment and other software packages, teamwork, case studies, invited guest lecturers, presentations of project works, e-learning materials, forums and consultations.			
13.	Total fund of work hours		7,5 EKTC x 30 h = 225 h	
14.	Available hours distribution		45+30+150 = 225	
15.	Teaching activities	15.1.	Theoretical classes	45 h
		15.2.	Practical classes (labs, exercises), seminars, team work	30 h
16.	Other activities	16.1.	Project tasks	50 h
		16.2.	Self study	50 h
		16.3.	Homework	50 h
17.	Grading			
	17.1.	Tests		40 points
	17.2.	Seminar work/ project (presentation: written and oral)		50 points
	17.3.	Active participation		10 points

18.	Grading criteria (points/grade)	to 59 points	5 (five) (F)
		from 60 to 68 points	6 (six) (E)
		from 69 to 76 points	7 (seven) (D)
		from 77 to 84 points	8 (eight) (C)
		from 85 to 92 points	9 (nine) (B)
		from 93 to 100 points	10 (ten) (A)
19.	Conditions for attending the final exam	Successful completion of activities 15.1 and 15.2	
20.	Language	Macedonian or English	
21.	Quality assessment	Internal evaluation and student pools	

22. Literature

22.1. Compulsory

No.	Author	Title	Publisher	Year
1.	Walker, J.	Mobile Information Systems	Artech House	1990
2.	E. H. Callaway Jr.	Wireless Sensor Networks: Architectures and Protocols	CRC Press	2003
3.	Dr. Grifoni, ed.	Multimodal Human Computer Interaction and Pervasive Services	Information Science Reference (USA)	2009

22.2. Additional

No.	Author	Title	Publisher	Year
1.	R.Rodger	Beginning Mobile Application Development in the Cloud	Wiley	2012
2.				
3.				