1.	Course title	Embedded computer components design		
2.	Course code	IIS-I-01		
3.	Study program	**Intelligent Information systems**		
4.	Unit offering the course	**FCSE**		
5.	Undergraduate/master/PhD	**Master**		
6.	Year/semester 1/winter/elective	7. ECTS: **6**		
8.	Teacher(s)	Prof. Vladimir Trajkovik		
9.	Course prerequisites	None		
10.	Goals (competences): Student will be able to model and design embedded computer components. It will also get to know basics for development of mobile services and applications.			
11.	Course content: Modeling and design of software components in distributed environments. Embedded systems operating systems. Introduction to programming with limited input/output and memory resources. Principles of optimization of battery savings. Real time and near real time embedded systems. Integrated embedded systems development environments. Embedded systems interfaces. Embedded systems security issues. Evaluation, customization and integration of embedded systems components. Embedded systems software development principles. Mobile services architectures.			
12.	Teaching methods: Lectures supported by slide presentations, interactive lectures, trainings (using lab equipment and software packages), team work, case studies, invited guests and lectures, individual practical assignments presentations, seminar paper, e-learning (forums, consultations).			
13.	Total available time	6 ECTS x 30 hours = 180 hours		
14.	Distribution of the available time	130 + 0 + 50 = 180 hours		
15.	Teaching activities	15.1.	Lectures	130 hours
		15.2.	Training (labs, problem solving), seminar and team work	0 hours
16.	Other activities	16.1.	Project work	15 hours
		16.2.	Self study	15 hours
		16.3.	Home work	20 hours
17.	Grading			
	17.1.	Tests		65 points
	17.2.	Seminar work/project (written or oral presentation)		25 points
	17.3.	Active participation		10 points
18.	Grading criteria		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.	Final exam prerequisites			Successfully completed activities 15.1 and 15.2		
20.	Course language			Macedonian and English		
21.	Quality assurance methods			Internal evaluation and student questionnaires		
22.	Literature					
	22.1.	Compulsory				
		No.	Authors	Title	Publisher	Year
		1.	R. S. Janka	Specification & Design Methodology for Real-time Embedded Systems	Kluwer Academic Publishers	2002
		2.	W. Wolf	Computers as Components: Principles of Embedded Computer Systems Design	Morgan Kaufmann	2000
		3.	A .S. Berger	Embedded Systems Design: An Introduction to Processes, Tools & Techniques	CMP Books	2001
	22.2.	Additional				
		No.	Authors	Title	Publisher	Year
		1.				
		2.				
		3.				