1.	Course Title	Web Based Systems		
2.	Code	F18L3W079		
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 / mandatory	7. ECTS credits 6		
8.	Teacher	full professor Dimitar Trajanov, assistant professor Milosh Jovanovikj		
9.	Course enrollment prerequisites	Веб прогрмирање или Интернет технологии или Имплементација на системи со отворен и слободен код		
10.	Course program goals (competencies): Learning and using the technologies of the Semantic Web and Linked Data. The students will learn how to develop intelligent applications based on Linked Data, and discover and use Open Data datasets.			
11.	Course program content: The development of WWW. The Semantic Web. Basic protocols and standards for the Semantic Web. Ontology development (analysis, reuse, design, metadata, knowledge base). Open Data. Linked Data. Schema.org as a concept for global communication. Using large-scale datasets (DBpedia). Linked Data Provenance. Creating your own datasets. Data cleaning and preparation. Using and processing text files. Statistical and machine analysis of data. Intelligent applications based on Linked Data.			
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	Péter Szeredi, Gergely Lukácsy, Tamás Benkő, Zsolt Peter Nagy	The Semantic Web explained: The Technology and Mathematics Behind Web 3.0	Cambridge: Cambridge University Press	2014
	2	Foster Provost, Tom Fawcett	Data Science for Business	O'Reilly Media	2013
	3	David Wood	Linked Data: Structured Data on the Web	Manning Publications Co	2014
	4	Leslie Sikos	Mastering Structured Data on the Semantic WebFrom HTML5 Microdata to Linked Open Data	Apress	2015

22.2. Additional course material

No.	Author	Title	Publisher	Year