

1.	Course	<i>Semantic web and semantic web services</i>		
2.	Code	KNI_E9		
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 Dimitar Trajanov		
9.	Prerequisites	None		
10.	Course programme goals (competences): The students will be able to apply the semantic web and develop semantic web services.			
11.	Course syllabus: Semantic web vision: structured web documents: XML. Describing web resources: RDF. RDF schema. Web ontologies language: OWL. Logic and conclusions: rules. Descriptive logic programs. Semantic web rules language (SWRL). Ontology development, reuse of existing ontologies, ontology mapping. Semantic web applications. Semantic web services. Web services and web service standards. OWL-S: High-level ontologies for web service description, adding semantics to the web service descriptions WSDL-S, OWL-S in UDDI mapping.			
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
		1.	Toby Segaran, Colin Evans and Jamie Taylor	Programming the Semantic Web	O'Reilly
		2.	Grigoris Antoniou and Frank van Harmelen		MIT Press
	3.	Lee Feigenbaum et al	The Semantic Web in Action	Scientific American	
	22.2.	Additional			
		No.	Author	Title	Publisher
		1.	Natalya F. Noy and Deborah L. McGuinness	Ontologies 101	Stanford University
		2.	Liyang Yu	Introduction to the Semantic Web and Semantic Web Services	Taylor & Francis Group
3.					