

1.	Course	Modeling network reliability			
2.	Code	INF-S10			
3.	Study programme	Informatics			
4.	Study programme organized by	Faculty of Computer Science and Engineering			
5.	Cycle	Third - PhD			
6.	Academic year / semester winter/summer/elective	first/second	7.	ECTS credits	7.5
8.	Teacher	Prof. D-r Marija Mihova, Prof. D-r Zaneta Popeska,			
9.	Prerequisites	None			
10.	1. Course programme goals (competences): The goal of the course is to enable students to learn the basics of network reliability, algorithms for calculating the reliability of networks, and metrics for estimating the importance of network components.				
11.	Course syllabus: Reliability of systems and transportation systems. Modeling the network reliability. Statistical methods for analysis of network reliability. Algorithms for calculating network and transportation systems Measures for components importance.				
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 ECTS 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	40 h	
16.	Other activities	16.1.	Project tasks	30 h	
		16.2.	Self study	30 h	
		16.3.	Homework	80 h	
17.	Grading				
	17.1.	Tests	60 points		
	17.2.	Seminar work/ project (presentation: written and oral)	40 points		
	17.3.	Active participation	0 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.	D. D. Harms	Network reliability: experiments with a symbolic algebra environment	CRC Press series on discrete mathematics and its applications	1995
		2.	Douglas R. Shier	Network Reliability and Algebraic Structures	Oxford University Press,	1991
	22.2.	Additional				
		No.	Author	Title	Publisher	Year