Add. 3	**Course program for the first, second and third level (cycle) of studies**

1.	Course title	Reliability of technical systems			
2.	Code	224			
3.	Study group(s)	MV, TML			
4.	The organizer of the study programme (unit, institute, department)	Faculty of Mechanical Engineering - Skopje, Ss. Cyril and Methodius University in Skopje			
5.	Level (first, second, third)	First			
6.	Academic year / semester	III / VI (summer)	7.	ECTS credits	6
8.	Instructor	Dr. Igor Gjurkov, associate professor			
9.	Prerequisites	Mathematics 1 Mathematics 2			
10.	Course objectives (competences): Application of mathematical distributions for failure occurrence. System analysis and determination of the reliability structure. Calculation of system reliability. Determination of the distribution law and fitting of its parameters according to real system data. Assessment of lifetime tests and failure statistics.				
11.	Course content: Fundamentals of statistics and probability theory. Laws of distribution. Component and system reliability analysis. Failure mode and effect analysis. Fault tree analysis. Lifetime tests and failure statistics. Methods for reliability test planning. Lifetime calculations for machine components. Maintenance and reliability. Reliability assurance. Reliability and probabilistic design.				
12.	Study methods: lectures, exercises / lab, project, self study				
13.	Total hours	6 ECTS x 30 hours = 180 hours			
14.	Hours allocation per activity:	30 + 30 + 40 + 20 + 60 = 180 hours			
15.	Lectures/Lab	15.1.	Lectures	30 hours	
		15.2.	Lab (student work)	30 hours	
16.	Project Work/Assignments	16.1.	Project assignments	40 hours	
		16.2.	Individual assignments	20	
		16.3.	Self-study	60 hours	
17.	Points/Marks:				
	17.1.	Tests	65		
	17.2.	Projects	30		
	17.3.	Attendance	5		
18.	Grading scale	Under 50	5 (five) (F)		
		51 - 60 points	6 (six) (E)		
		61 - 70 points	7 (seven) (D)		
		71 - 80 points	8 (eight) (C)		
		81 - 90 points	9 (nine) (B)		
		91 - 100 points	10 (ten) (A)		
19.	Prerequisites for taking the final exam	completed activity 16.1			
20.	Language of Instruction	Macedonian			
21.	Course evaluation	Student questionnaire			

22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year
		1.	Todor Davchev	Reliability and maintenance of technical systems (in Macedonian)	Studentski zbor, Skopje	2009

		2.	G. Ivanovic et al.	Reliability of technical systems (in Serbian)	FTN, Novi Sad	2010
		3.				
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	B. Bertsche	Reliability in automotive and mechanical engineering	Springer, Berlin	2008