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

1.	Course title	MEHATRONIC SYSTEMS DESIGN				
2.	Code	268				
3.	Study group(s)	MHT				
4.	The organizer of the study program (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	Summer term	7.	ECTS credits	6	
8.	Instructor	prof. Ivan Mickoski, Ph. D.				
9.	Prerequisites	Mechanisms in robotics - signature				
10.	Course objectives (competences): Studying simulation, modeling and design of mechatronics modules and systems.					
11.	Course content: Systematic approach to project design; input data and criteria for qualitative project design; design of algorithms and methods for executive devices, control devices, information systems in mechatronics; Establishing basic project solutions for mehatronic systems; Automated project design and modeling of mehatronic systems. Introduction to the design of the electromechanical and hydro-pneumatic mehatronic modules, modeling in MATLAB / Simulink program package. Introduction to methods and systems for automatic designing of mehatronic modules. Development of final project.					
12.	Study methods: interactive lectures, auditory practice and/or labaratory practice, self-running and/or team work projects, self-learning					
13.	Total hours	6 ECTS x 30 Hours = 180 Hours				
14.	Hours allocation per activity:	30 + 45 + 0 + 45 + 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	60 Hours		
		16.2.	Individual assignments	0		
		16.3.	Self-study	60 Hours		
17.	Points/Marks:					
	17.1.	Tests	80 points			
	17.2.	Projects	10 points			
	17.3.	Attendance	10 points			
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 activitie 16.1				
20.	Language of Instruction	Macedonian				
21.	Course evaluation	Student questionnaire				

22.	Textbooks

	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year
		1.	Ivan Mickoski Hristijan Mickoski	Mehatronic systems design	Internal e-Script	2011
		2.	German-Galkin, S.G	MATLAB / Simulink: Mehatronic systems design	Corona	2008
		3.	Devdas Shetty Richard A. Kolk	Mechatronics system design	Cengage Learning	2011
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.				
		2.				
		3.				