Add. 3		**Course program for the first, second and third level (cycle) of studies**			
1.	Course title	Automotive mechatronic systems			
2.	Code	211			
3.	Study group(s)	MV			
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	IV / VIII (summer)	7.	ECTS credits	6
8.	Instructor	Dr. Igor Gjurkov, associate professor			
9.	Prerequisites	Vehicle control systems Design of motor vehicles			
10.	Course objectives (competences): Understanding and analysis of functionality of existing automotive mechatronic systems. Modeling and functional design of basic mechatronic systems within mathematical and virtual vehicle models. Simulation, analysis and optimization of automotive mechatronic systems.				
11.	Course content: Sensors and actuators used in automotive mechatronic systems. Vehicle propulsion and speed regulation mechatronic control systems. Vehicle braking mechatronic control systems. Steering and handling 2WS and 4WS mechatronic control systems. Vehicle suspension mechatronic control systems: semi-active and active. Chassis motion stability mechatronic control systems. Modern driver-assist safety systems. Modeling and simulation of basic automotive mechatronic systems. Analysis and optimization.				
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 hours
		16.3.	Self-study		60 hours
17.	Points/Marks:				
	17.1.	Tests			60
	17.2.	Projects			35
	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					
		Instruction materials				
	22.1.	No.	Author	Title	Publisher	Year
		1.	B.T. Fijalkowski	Automotive mechatronics, Vol 1 & 2	Springer, Heidelberg	2011
		2.	U. Kiencke, L. Nielsen	Automotive control	Springer,	2005

				systems	Heidelberg	
		3.	G. Genta, L. Morello	The automotive chassis, Vol 1 & 2	Springer, New York	2009
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	E. Guglielmino et. al.	Semi-active suspension control	Springer. London	2008