

Add. 3		Course program for the first, second and third level (cycle) of studies				
1.	Course title	Robot control				
2.	Code	320				
3.	Study group(s)	ACS				
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	winter	7.	ECTS credits	6	
8.	Instructor	prof. d-r AtanaskoTuneski				
9.	Prerequisites	Systems and control - passed				
10.	Course objectives (competences): Study of the principles for control of the manipulation robots, design of the servo system for robot control, design of the dynamic control of robot, robust and adaptive robot control					
11.	Course content: Determination of the dynamic model of the robotic system. Design of the dynamic local servo systems for robot control. Design of the decentralized control with simultaneous motion of the robot joints. Design of the global control with manipulation robot. Computer design of the robot control. Analysis of the manipulation robot stability when control laws are implemented.					
12.	Study methods: Interactive teaching, laboratory and/or auditory exercises, standalone and/or team project work, standalone learning.					
13.	Total hours	6ECTSx30 classes = 180 hours				
14.	Hours allocation per activity:	30 + 30 + 30 + 30 + 30 = 150 hours				
15.	Lectures/Lab	15.1.	Lectures	30 hours		
		15.2.	Lab (student work)	30 hours		
16.	Project Work/Assignments	16.1.	Project assignments	30 hours		
		16.2.	Individual assignments	30 hours		
		16.3.	Self-study	30 hours		
17.	Points/Marks:					
	17.1.	Tests			70 points	
	17.2.	Projects			20 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	Accomplished 16.1				
20.	Language of Instruction	Macedonian				
21.	Course evaluation	Student questionnaire				
22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year
		1.	Миомир Вукобратовиќ, Душан Стокиќ	Управљање манипулационим роботима	Техничка књига, Београд	1990
2.	R.P.Paul	Robot Manipulators: Mathematics, Programming, and	The MIT Press, Cambridge, USA	1984		

				Control		
		3.	H.Asada, J.J.E.Slotine	Robot Analysis and Control	John Wiley and Sons, Inc., USA	1986
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.				