

Add. 3		Course program for the first, second and third level (cycle) of studies			
1.	Course title	Diagnostics and maintenance			
2.	Code	138			
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	IV / VII (winter)	7.	ECTS credits	6
8.	Instructor	Dr. Igor Gjurkov, associate professor			
9.	Prerequisites	MV students: Motor vehicle design TML students: Motor vehicles			
10.	Course objectives (competences): Detection, localization, analysis and repair of faults in the main automotive and mechanization machinery systems. Use of basic, universal diagnostic tools and equipment. Diagnostic skills using dedicated modern off-board diagnostics equipment.				
11.	Course content: Motor vehicles' maintenance – general approach and strategies. Diagnostic methods for motor vehicles and mechanization machinery maintenance. Diagnostic on system's and on component's level. On-board diagnostics. Sensors and actuators. Off-board diagnostics tools and equipment. Modern gasoline and diesel engine diagnostics. Steering, suspension and braking systems' diagnostics and maintenance. Specific diagnostic methods for mechanization machinery.				
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 + 50 + 0 + 70 = 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	50 hours	
		16.2.	Individual assignments	0	
		16.3.	Self-study	70 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
	1.	Todor Davchev	Automotive engines: components, diagnostics, maintenance (in	Studentski zbor, Skopje	2011

				Macedonian)		
		2.	Todor Davchev	Motor vehicles' braking systems (in Macedonian)	Studentski zbor, Skopje	2000
		3.	Tom Denton	Advanced automotive fault diagnosis	Elsevier, Oxford	2006
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	Tom Denton	Automotive electrical and electronic systems	Elsevier, Oxford	2004