

Add. 3		Course program for the first, second and third level (cycle) of studies				
1.	Course title	IC engines and the environment				
2.	Code	221				
3.	Study group(s)	EE				
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.	Number of ECTS credits	6	
8.	Instructor	Mile Dimitrovski				
9.	Prerequisites	Thermodynamic				
10.	Course objectives (competences): Introduction to theoretical and practical part of engines, analysis of engines, other systems, calculation of basic engines parameters. Emission from engines. Resolving the emission from engines.					
11.	Course content: Introduction, Historical development, types. Construction and basic parts. Theoretical and real cycles, analysis. Calculation and design of Otto, Diesel and Sabbath. Heat transfer, energy. IC engines systems. Pollution from engines. Pollution, emissions, emission. Solutions for resolving the emission in IC engines.					
12.	Study methods: Teaching lectures, auditory/laboratory practice, self/team work, home studding					
13.	Total hours	6 ECTS x 30 hours = 180 hours				
14.	Hours allocation per activity:	30 + 30 +30+30 +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	30 hours		
		16.2.	Individual assignments	30 hours		
		16.3.	Self-study	60 hours		
17.	Points/Marks:					
	17.1.	Tests	90 points			
	17.2.	Projects	8 points			
	17.3.	Attendance	2 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	Research and presentation for the Project 17.2 Homework				
20.	Language of Instruction	Macedonian				
21.	Course evaluation	Continuous evaluation and review.				
22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year
		1.	Mile Dimitrovski	Theory and analysis of IC engines	UKIM	2003
2.		Mile Dimitrovski	Engines and the environment	UKIM	2011	

		3.	Dame Dimitrovski	Selection of resolved tasks	Internal issue MFS	1978
		Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
	22.2.	1.	Nicholas P. Chermisinoff	Handbook of solid waste management and waste minimization technologies	Academic press	2003
		2.	George Tchobanoglous, Frank Kraith	Handbook of solid waste management	The Royal Society of Chemistry	2002
		3.				