Add. 3		**Course program for the first, second and third level (cycle) of studies**
1.	Course title	Design and tuning engines
2.	Code	128
3.	Study group(s)	TE
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	IC engines - signature
10.	Course objectives (competences): Introduction to theoretical and practical part of engines, analysis of engines, other systems, calculation of basic engines parameters. Intro to design and calculation of specific engine parameters Otto and Diesel.	
11.	Course content: Introduction, Historical development, types. Construction and basic parts. Theoretical and real cycles, analysis. Calculation and design of Otto, Diesel and Sabathe. Heat transfer, energy. IC engines systems. Pollution from engines. Examples of typical engines. Calculation and development of IC engine.	
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 +80+10 +30 = 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	80 hours
		16.2.	Individual assignments	10 hours
		16.3.	Self-study	30 hours

17.	Points/Marks:		
	17.1.	Tests	20 points
	17.2.	Projects	70 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	Research and presentation for the Project 17.2 Homework
20.	Language of Instruction	Macedonian
21.	Course evaluation	Continuous evaluation and review.

22.	Textbooks					
		Instruction materials				
			No.	Author	Title	Publisher	Year
	22.1.		1.	Dame Dimitrovski	Design and calculation of IC engine	Internal ishue	2009
			2.	Mile Dimitrovski	Theory and analysis of IC engines	UKIM	2003

		3.	Mile Dimitrovski	Tuning engines	MFS	2007
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	Gjorgje Davidovikj	Wankel engines	UKIM	
		2.				
		3.				