

Add. 3		Course program for the first, second and third level (cycle) of studies				
1.	Course title	Thermal measurements				
2.	Code	306				
3.	Study group(s)	TI				
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	Prof. Milan Šarevski Ph.D				
9.	Prerequisites	none				
10.	Course objectives (competences): Introduction and study of theory of uncertainty of measurement; temperature; pressure; velocity; humidity; heat energy; measurement methods, instruments, procedure data analyses of measurement results.					
11.	Course content: Thermal measurements; Theory of uncertainty of measurement- Type A and Type B uncertainty, standard uncertainty, combined uncertainty, expanded uncertainty; levels of confidence; effective degrees of freedom; coverage factor. Measurement of temperature, pressure; velocity; flow; humidity; heat energy; measurement methods, instruments, procedure data analyses of measurement results.					
12.	Study methods: Teaching lectures, auditory/laboratory practice, self/team work, home studying					
13.	Total hours	6 ECTS x 30 hours = 180 hours				
14.	Hours allocation per activity:	30 + 30 +10 +10 +100 = 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	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	None				
20.	Language of Instruction	Macedonian				
21.	Course evaluation	Student questionnaire				
22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year
	1.	M. Шаревски	Термички мерења	УКИМ		

		2.	Howard	Guide to the Measurement of Pressure and Vacuum	NPL , London	1994
		3.				
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	Nicholas,White	Traceable temperatures	John Wiley & Sons NY	2001
		2.	ISO	Guide of Expression of Uncertainty of Measuremet	ISO	1993
		3.				