

Add. 3		Course program for the first, second and third level (cycle) of studies			
1.	Course title	Unconventional methods of processing			
2.	Code	226			
3.	Study group(s)	PE, IEM			
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	summer	7.	ECTS credits	6
8.	Instructor	Prof D-r Ljuben Dudeski Prof D-r Jasmina Caloska			
9.	Prerequisites	N/A			
10.	Course objectives (competences): Introducing the basic technical and technological characteristics of unconventional methods of processing. Working principles, basic processes and application.				
11.	Course content: General concepts, types and division. Processing with abrasive water jet. Ultrasound processing. Working with electro erosion. Working with electronic jet. Treatment with ion jet. Plasma processing. Laser processing. Chemical processing. Electrochemical processing. Unconventional methods for plastic deformation: deformation with fluid pressure, deformation by using rubber and deformation by using explosion.				
12.	Study methods: Interactive lectures, exercises auditory and / or laboratory, individual and / or team working on project assignments, self-study.				
13.	Total hours	6 ECTS x 30 hours = 180 hours			
14.	Hours allocation per activity:	30 + 30 + 40 + 20 + 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	40 hours	
		16.2.	Individual assignments	20 hours	
		16.3.	Self-study	60 hours	
17.	Points/Marks:				
	17.1.	Tests	60 points		
	17.2.	Projects	30 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	Realized activity 16.1			
20.	Language of Instruction	Macedonian			
21.	Course evaluation	Student questionnaire			
22.	Textbooks				
	22.1.	Instruction materials			
No.		Author	Title	Publisher	Year

		1.	S. Trajkovski, Lj. Dudeski	Unconventional methods of processing	Ss. Cyril and Methodius University in Skopje	1998
		2.	Lj. Dudeski, J. Caloska	Unconventional Manufacturing Process	Internal script, Faculty of Mechanical Engineering - Skopje	2010
		3.				
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.				
		2.				