

Add. 3		Course program for the first, second and third degree of studies			
1.	Course title	Related welding methods			
2.	Code	297			
3.	Study group(s)	MJSE, DS			
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 degree)	First			
6.	Academic year / semester	winter	7.	Number of ECTS credits	6
8.	Professor	Prof. Dobre Runchev, Ph.D			
9.	Preconditions for enrolling the course	Joining techniques - passed			
10.	Purpose of the course program (competences): Selection, preparation and realization of various technologies for: surfacing, thermal spraying and thermal cutting.				
11.	Contents of the course program: Introduction to related welding methods: surfacing, thermal spraying - metallization and thermal cutting, brazing and adhesive bonding. Introduction in details with preparation and realization of technologies for: surfacing, thermal spraying and thermal cutting with gas flame, electric arc, plasma and laser.				
12.	Study methods: Interactive lectures, auditory and/or laboratory practice, individual and/or team work on project assignments, individual study.				
13.	Total available time period	6ECTSx30 hours =180 hours			
14.	Available time assessment	30+30+12+8+100=180 hours			
15.	Educational activity module	15.1.	Teaching lectures	30 hours	
		15.2.	Practice, seminars, team work	30 hours	
16.	Other activity module	16.1.	Project assignments	12 hours	
		16.2.	Selfrunning assignments	8 hours	
		16.3.	Home studying	100 hours	
17.	Evaluation methods				
	17.1.	Tests			70 points
	17.2.	Projects			20 points
	17.3.	Activity and participation			10 points
18.	Evaluation criteria (points and marks)	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.	Signature and final exam requirements	Realization of activities 15.1, 15.2, 16.1 and 16.2			
20.	Language used for performing the teaching	Macedonian language			
21.	Method used for following the teaching quality	Questioners and other forms of continues evaluation			
22.	References				

	22.1.	Main references				
		No.	Author	Title	Publisher	Year
		1.	Добре Рунчев	Сродни постапки на заварување	Машински факултет - Скопје	2004
		2.				
	3.					
	22.2.	Additional references				
		No.	Author	Title	Publisher	Year
		1.	K. Smolka	Termisches Spritzen	DVS Band 15	1985
		2.	N.N.	Handbuch für das Reparaturschweißen und Instandhaltungsschweißens	ESAB, Sgзetterqvist, Göteborg	1999
	3.	Robert Killing	Welding processes and thermal cutting	DVS Verlag	2004	