

Add. 3		Course program for the first, second and third degree of studies			
1.	Course title	Welding technology			
2.	Code	316			
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 welding technologies for different metallic materials. Preparation and conducting additional treatment of welded joints. Recognizing of various related welding methods, their basic characteristics and realization.				
11.	Contents of the course program:  Introduction to heat processes in basic material, selection of method and optimal regime of welding, welding of steel materials, welding of non-ferrous materials, residual stresses and deformations, Post weld heat treatment and protection of welded joint, welding technology of various structures, basics of related welding methods.				
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+0+8+112=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	0 hours	
		16.2.	Selfrunning assignments	8 hours	
		16.3.	Home studying	112 hours	
17.	Evaluation methods				
	17.1.	Tests	80 points		
	17.2.	Projects	10 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 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.	Дончо Чалоски	Технологија на заварување - Скрипта	Машински факултет - Скопје	1984
		2.	Добре Рунчев	Технологија на заварување - скрипта	Машински факултет - Скопје	1998
	3.					
	22.2.	Additional references				
		No.	Author	Title	Publisher	Year
		1.	Ivan Samardžić	Digitalni udžbenik - Projektiranje tehnologije zavarivanja	Strojarski fakultet, Slavonski Brod	2005
		2.	Howard Cary, Scott Helzer	Modern welding technology	Pearson Prentice Hall	2005
		3.	Joseph Abbott, Karen Mitchell Smith	Welding Technology	Texas State Technical College Publishing	2011