

Add. 3		Course program for the first, second and third degree of studies			
1.	Course title	Equipment in processing facilities			
2.	Code	241			
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. Jovan Gochev, Ph.D			
9.	Preconditions for enrolling the course	Materials in mechanical engineering 1 - passed Materials in mechanical engineering 2 - passed Welding technolgeous - signature			
10.	Purpose of the course program (competences): Prepares the student for design, calculation, production and repairs on a newly produced and existing devices in the process industries.				
11.	Contents of the course program: Basic principles of design of equipment. Stess in the equipment. Stress in discontinuities. Strengthening. Reliance. Action of external pressure. Silos. Heat exchangers. Thermal stresses. Fracture mechanics.				
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+30+0+90=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	30 hours	
		16.2.	Selfrunning assignments	0 hours	
		16.3.	Home studying	90 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				
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.	проф. д-р Тодор Аџиев	Конструкција и изработка на процесни апарати		1995
	2.	МКС EN 13445 / 3 - 2009	Македонски стандард Институт за стандардизација		2009
	3.				
22.2.	Additional references				
	No.	Author	Title	Publisher	Year
	1.				