

Add. 3		Course program for the first, second and third degree of studies			
1.	Course title	Testing of welded joints and structures			
2.	Code	165			
3.	Study group(s)	MJSE			
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	summer	7.	Number of ECTS credits	6
8.	Professor	A.Prof. Dimitri Kozinakov, PhD			
9.	Preconditions for enrolling the course				
10.	Purpose of the course program (competences): Introduction to testing of welded joints and structures; imperfections in welded joints and structures; methods for testing of welded joints; legislation in the examination of welded joints and structures. Capable for testing, detection and recognition of possible imperfections in materials, welded joints and structures. Estimation of condition of welded joints and structures by testing. Application of regulations and standards. Testing and control of finished welded structures and equipment.				
11.	Contents of the course program: Importance of testing methods in quality assurance of welded joints, structures and equipment. Imperfections in materials, welded joints and structures. Visual testing and dimensional control. Liquid Penetrant testind. Magnet particle testing. Radiography testing. Ultrasonic testing. Other non-destructive methods. Destructive testing. Regulations and standards for testing of welded joints and structures. Testing and control of finished welded structures and equipment.				
12.	Study methods: interactive lectures, auditory practice and/or laboratory practice, self running and/or team work projects, self learning				
13.	Total available time fund.	6 ECTS x 30 hours = 180 hours			
14.	Distribution of the available time.	30+ 30 + 4 + 30 + 86 = 180 hours			
15.	Forms of teaching activities.	15.1.	Teaching lectures	30 hours	
		15.2.	Practice, seminars, team work	30 hours	
16.	Other forms of activities	16.1.	Project assignments	4 hours	
		16.2.	Self running assignments	30 hours	
		16.3.	Home studying	86 hours	
17.	Evaluation methods				
	17.1.	Tests			0 points
	17.2.	Projects			90 points
	17.3.	Activity and participation			10 points
18.	Evaluation criteria (score / rating)	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	Tasks 17.2 and 17.3 completed
20.	Language used for performing the teaching	Macedonian language
21.	Evaluation method for monitoring the teaching quality	Questionnaire and other type of continuum evaluation

22.	Literature					
	22.1.	Basic literature				
		No.	Author	Title	Publisher	Year
		1.	Георгиевски В.	Испитување и контрола на заварени врски и конструкции	Унив. Св. Кирил и Методиј во Скопје	1982
		2.	Козинаков Д.	Испитување на заварени врски и конструкции. Предавања		
		3.				
	22.2.	Additional references				
		No.	Author	Title	Publisher	Year
		1.		Nondestructive Evaluation and Quality Control, ASM Handbook	ASM Handbook Committee	1992
				Handbook of Nondestructive Testing	American Society of Nondestructive Testing	2003