

Add. 3		Course program for the first, second and third degree of studies			
1.	Course title	Material science 2			
2.	Code	193			
3.	Study group(s)	PE, TML, TE, HEWM, MJSE, IEM, MV, EE, Mech, ACS, 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 Gocev, PhD A. Prof. Dimitri Kozinakov, PhD Prof. Zoran Bogatinoski, PhD			
9.	Preconditions for enrolling the course	none			
10.	Purpose of the course program (competences): Introduction to mechanical, technological and non-destructive testing methods of materials used in mechanical engineering. Casting. Powder metallurgy. Corrosion and corrosion protection.				
11.	Contents of the course program: Introduction to material testing. Static testing. Hardness, toughness and fatigue tests. Technological tests. Non-Destructive Testing. X-ray and γ -ray testing. Ultrasonic testing. Magnet particle testing. Liquid penetrant testing. Casting. Sand, shells and die casting. Precise casting. Pressure casting. Centrifugal casting. Construction castings. Powder metallurgy. Corrosion of metals. Corrosion protection.				
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.	Lectures, theory	30 hours	
		15.2.	Practice, seminars, team work	30 hours	
16.	Other forms of activities	16.1.	Project assignments	4 hours	
		16.2.	Selfrunning assignments	30 hours	
		16.3.	Home studying	86 hours	
17.	Evaluation methods				
	17.1.	Tests			70 points
	17.2.	Projects			20 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 competed			
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.	Тодор Ациев	Машински материјали 2	Атинг	1995
	2.				
22.2.	Additional literature				
	No.	Author	Title	Publisher	Year
	1.				