

Add. 3		Course program for the first, second and third degree of studies			
1.	Course title	Materials, technology and testing			
2.	Code	188			
3.	Study group(s)	PI, ID, 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 material properties used in mechanical engineering. Application and selection of materials. Introduction to mechanical, technological and non-destructive testing methods. Casting. Powder metallurgy. Corrosion and corrosion protection.				
11.	Contents of the course program: Introduction to engineering materials. Selection of best suitable material. Types of materials. Material structure. Basic characteristics of materials. Metals. Steel. Cast iron. Classification and designation. Thermal treatment of steel and cast iron. Non-ferrous metals. Composites. Polymers. Ceramics. Materials in industrial design. Introduction to material testing. Static testing. Hardness testing. Toughness testing. Fatigue testing. Technological testing. Non-destructive testing. Casting. Powder metallurgy. Corrosion of materials. Protection against corrosion.				
12.	Study methods: interactive lectures, auditory practice and/or laboratory practice, self 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 + 20 + 96 = 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.	Self running assignments	20 hours	
		16.3.	Home studying	96 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				
	Basic literature				
	No.	Author	Title	Publisher	Year
22.1.	1.	Тодор Ациев	Машински материјали 1	Атинг	1995
	2.	Тодор Ациев	Машински материјали 2	Атинг	1995
	3.				
	Additional literature				
	No.	Author	Title	Publisher	Year
22.2.	1.				