

Add. 3		Course program for the first, second and third level (cycle) of studies			
1.	Course title	Discrete Mathematics			
2.	Code	142			
3.	Study group(s)	Industrial Engineering and Management			
4.	The organizer of the study program (unit, institute, department)	Institute of Mechanical Construction, Mechanization Machines and Vehicles			
5.	Level (first, second, third)	First			
6.	Academic year / semester	Second / summer	7.	ECTS credits	6
8.	Instructor	Aleksa Malcheski			
9.	Prerequisites	none			
10.	Course objectives (competences): Introduction to the basics of linear algebra, analytic geometry and graph theory. Competence in modeling and solving engineering problems.				
11.	Course content: Determinants. Matrices. Systems of linear equations. Analytic geometry in two dimensional and three dimensional Euclidean space. Graph theory. Modeling and solving engineering problems.				
12.	Study methods: lectures, auditory practice, homework, self-learning				
13.	Total hours	6 ECTS x 30 hours = 180 hours			
14.	Hours allocation per activity:	30+30+0+30+90 = 180 hours			
15.	Lectures/Lab	15.1.	Lectures	30 hours	
		15.2.	Lab (student work)	30 hours	
16.	Project Work/Assignments	16.1.	Project assignments	0 hours	
		16.2.	Individual assignments	30 hours	
		16.3.	Self-learning	90 hours	
17.	Points/Marks:				
	17.1.	Tests	90 points		
	17.2.	Projects	0 points		
	17.3.	Attendance	10 points		
18.	Grading scale	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.	Prerequisites for taking the final exam	activity 17.3			
20.	Language of Instruction	Macedonian			
21.	Course evaluation	Student questionnaire			

22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year
		1.	P.Krzoski, I.Sapkarev	Linear Algebra and Analytic Geometry	Ss. Cyril and Methodius University i	1988
		2.	A.Malcheski	Discrete Mathematics (lecture notes)	Ss. Cyril and Methodius University	2002
3.		I. James, Glyn	Modern Engineering Mathematics	Pearson, Prentice Hall	2008	

		Supplemental Instruction Materials				
22.2.		No.	Author	Title	Publisher	Year
		1.	Darko Veljan	Combinatorics and discrete mathematics	Algoritam, Zagreb	2001
		2.	N. Tuneski	Problem Book in probability and statistics (lecture notes)	Ss. Cyril and Methodius University	