Add. 3	**Course program for the first, second and third level (cycle) of studies**

1.	Course title	Linear Algebra				
2.	Code	183				
3.	Study group(s)	Production Engineering, Engineering Design, Mechanization and Logistics, Motor Vehicles, Materials Welding and Structural Engineering				
4.	The organizer of the study program (unit, institute, department)	Faculty of Mechanical Engineering - Skopje				
5.	Level (first, second, third)	First				
6.	Academic year / semester	Second / winter	7.	ECTS credits	6	
8.	Instructor	Aleksa Malcheski, Lazo Dimov, Ljubica Stefanova				
9.	Prerequisites	completed Mathematics 1				
10.	Course objectives (competences): Introduction to the basics of linear algebra, vector calculus, number and function series, differential equation and their application. Competence in solving mathematical problems arising in the engineering practice.					
11.	Course content: Determinants, matrices and their application. Vector calculus. Line and surface integrals. Series expansion of functions. Differential equations with function coefficients that can be transformed into differential equations with constant coefficients. Systems of differential equations. Introduction to partial differential equations.					
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				
	Instruction materials				
22.1.	No.	Author	Title	Publisher	Year
	1.	B.Trpenoski, N.Celakoski,	Advanced Calculus 1 Advanced Calculus 2	Prosvetno delo, Skopje	1994

			Gj. Chupona	Advanced Calculus 3		
		2.	L.Dimov	Differential Equations (lecture notes)	Faculty of Mechanical Engineering – Skopje	2004
		3.	I.Shapkrev	Mathematics 3 Mathematics 4	Ss. Cyril and Methodius University	1993
		4.				
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	E. Atanasova	Mathematics 2	Ss. Cyril and Methodius University	2002
		2	N.Celakoski	Differential Equations: exercises and problems	Faculty of Mechanical Engineering – Skopje	1986