Add. 3		**Course program for the first, second and third level (cycle) of studies**			
1.	Course title		Mathematical Analysis		
2.	Code		187		
3.	Study group(s)		HEM, AS, EE, MCHT, TE		
4.	The organizer of the study program (unit, institute, department)		Thermal Engineering; Hydraulics, Pneumatics and Automatics Engineering; Mechatronics		
5.	Level (first, second, third)		First		
6.	Academic year / semester		Second / winter	7.	ECTS credits 6
8.	Instructor		Aleksa Malcheski		
9.	Prerequisites		None		
10.	Course objectives (competences): Introduction to basics in linear algebra, differential equations and complex analysis as well as their application. Competence in solving mathematical problems arising in engineering practice.				
11.	Course content: Determinants, matrices, systems of linear equations and their application. Vector spaces. Linear differential equations. Systems of differential equations. Line integrals. Functions of one complex variable. Differentiability and integrals of functions of one complex variable. Analytic functions and conformal mappings. Singularities and residue theory.				
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			80 points
	17.2.	Projects			10 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				
		No.	Author	Title	Publisher	Year
	22.1.	1.	B.Trpenoski, N.Celakoski, Gj. Chupona	Advanced Calculus 2 Advanced Calculus 3	Prosvetno delo, Skopje	1994
		2.	A.Malcheski	Mathematical	Ss. Cyril and Methodius	2003

				Analysis (lecture notes)	University	
		3.	I.Shapkarev	Mathematics 3 Mathematics 4	Ss. Cyril and Methodius University	1993
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	B.S.Vatsa	Theory of Matrices	Wiley Eastern Limited	1992
		2	Murray Spiegel, Seymour Lipschutz,John Schiller, Dennis Spellman	Schaum's Outline of Complex Variables	McGraw-Hill (2nd ed.)	2009