

Add. 3		Course program for the second level (second cycle - postgraduate) of studies				
1.	Course title		Water and Waste Water Treatment			
2.	Code		1M6SEE02			
3.	Study group(s)		SEE			
4.	The organizer of the study program (unit, institute, department)		"Ss. Cyril and Methodius" University in Skopje, Faculty of Mechanical Engineering - Skopje			
5.	Level (first, second, third)		Second			
6.	Academic year / semester		V / summer	7.	ECTS credits	6
8.	Professor		Assoc. prof. dr. Zoran Markov			
9.	Prerequisites		None			
10.	Course objectives (competences): Learn how to water treatment works, operation in municipal and industrial treatment plant					
11.	Course content: Water treatment technologies, water quality parameters, waste water treatment, activated sludge processes, water quality laws and regulations					
12.	Study methods: lectures, lab, project assignments, individual assignments, self-study.					
13.	Total hours		6 ECTS x 30 = 180 hours			
14.	Hours allocation per activity:		30 + 15 + 40 + 30 + 65 = 180 hours			
15.	Lectures/Lab	15.1.	Lectures (15 weeks x 2)	30 hours		
		15.2.	Lab (student work)	15 hours		
16.	Project Work/Assignments	16.1.	Project assignments	40 hours		
		16.2.	Individual assignments	30 hours		
		16.3.	Self-study	65 hours		
17.	Points/Marks:					
	17.1.	Exams			40	
	17.2.	Projects			50	
	17.3.	Attendance			10	
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 16.1			
20.	Language		English			
21.	Course evaluation		Student questionnaire			
22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year

		1.	Lee C.C.	Handbook of Environmental Engineering Calculations	Mc-Graw Hill	2007
		2.	Kemer F.N.	The also Water Handbook	Mc-Graw Hill	
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	WEF Manual of Practice No. FD-3	Industrial waste water managment, treatment and disposal	WEF Press	2008