

Add. 3		Course program for the second level (second cycle - postgraduate) of studies			
1.	Course title	Fluid Mechanics in Environmental Engineering			
2.	Code	1M5SEE04			
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 / winter	7.	ECTS credits	6
8.	Professor(s)	Prof. dr. Valentino Stojkovski Assoc. prof. dr. Zoran Markov			
9.	Prerequisites	None			
10.	Course objectives (competences): Learn how to analyze fluid flows in environmental engineering, Simulate flows and investigate turbulence and boundary layer problems				
11.	Course content: Concepts of fluid properties, viscous flow analysis, turbulence, boundary layers, computational fluid dynamics				
12.	Study methods: lectures, lab, project assignments, individual assignments, self-study.				
13.	Total hours	6 ECTS x 30 hours = 180 hours			
14.	Hours allocation per activity:	30 + 15 + 40 + 30 + 65 = 180 hours			
15.	Lectures/Lab	15.1.	Lectures (15weeks 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.	Rubin H., Atkinson J.	Environmental Fluid Mechanics	Marcel Dekker Inc.	2001
		2.	Hirsch C.	Numerical Computation of Internal and External Flows: The Fundamentals of Computational Fluid Dynamics	Butterworth- Heinemann	2007
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year
		1.	White F. M.	Fluid Mechanics	Mc-Graw Hill	2008