

Add. 3		Course program for the first, second and third level (cycle) of studies			
1.	Course title	Fluid Flow Measurements			
2.	Code	300			
3.	Study group(s)	HEWM, ACS			
4.	The organizer of the study program (unit, institute, department)	Faculty of Mechanical Engineering - Skopje, Ss. Cyril and Methodius University in Skopje			
5.	Level (first, second, third)	First			
6.	Academic year / semester	winter	7.	ECTS credits	6
8.	Instructor	prof. d-r Valentino Stojkovski			
9.	Prerequisites	Fluid Mechanics – signature			
10.	Course objectives (competences): Introducing: implementation of the dimensional analysis and theory of similarity, implementation of the measurement instrumentation, accuracy of measurements, presentation of the results, methods and instrumentation for the pressure measurement, flow direction and velocity, discharge, temperature, movement, force and power. Perform the experiment using a computer.				
11.	Course content: Implementation of the dimensional analysis. Implementation of the theory of similarity. Implementation of the measurement instrumentation. Accuracy of the measurements and presentation of the results. Pressure measurement. Measurement of the fluid flow direction and flow velocity. Discharge measurement. Temperature measurement. Measurement of motion, force and power. Computerized data acquisition system – acquisition system and processing.				
12.	Study methods: interactive lectures, auditory practice and/or laboratory practice, self running and/or team work projects, self learning				
13.	Total hours	6 ECTS x 30 hours = 180 hours			
14.	Hours allocation per activity:	30 + 30 + 30 + 40 + 50 = 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	30 hours	
		16.2.	Individual assignments	40 hours	
		16.3.	Self-study	50 hours	
17.	Points/Marks:				
	17.1.	Tests	60 points		
	17.2.	Projects	30 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				
20.	Language of Instruction				
21.	Course evaluation				
21.	Student questionnaire				
22.	Textbooks				
	22.1.	Instruction materials			
		No.	Author	Title	Publisher
1.	Ношпап А.	Струјнотехнички мерења и инструменти	МБ-3	1995	

		2.	Стојковски В., Ношпал А., Костиќ З.	Практикум за лабораториски вежби по струјнотехнички мерења	Машински факултет- Скопје (интерна скрипта)	1994
		3.	Doebelin E. O.:	Measurement Systems - Application and Design	McGraw-Hill, NY	2002
		Supplemental Instruction Materials				
	22.2.	No.	Author	Title	Publisher	Year
		1.	Вушковиќ И.	Основе технике мерења	Машински факултет, Универзитета у Београду	1987
		2.	Чорлукиќ Ф.	Мерење протока флуида	АТМ и Техничка књига Загреб	1975
		3.	Бенишек М., Килибарда Р., Недељковиќ М., Герасимовиќ Д.	Збирка задатака из струјно-техничких мерења	Машински факултет, Универзитета у Београду	2006