Add. 3	**Course program for the first, second and third level (cycle) of studies**			
1.	Course title	Hydraulic volume machines		
2.	Code	323		
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/summer	7.	ECTS credits	6
8.	Instructor	Prof. d-r Zvonimir Kostik		
9.	Prerequisites	Fluid mechanics - passed		
10.	Course objectives (competences): Recognition, use and exploitation of hydraulic volume machines and power transfer. Design and realization of certain HVM constructions and hydrostatic transfers.			
11.	Course content: Getting familiar with the basic terms and definitions. Pumps with simple designs. Working parameters and characteristics of HVM. Working principles, designs, kinematic, hydraulic and dynamic parameters of certain types of pumps and hydromotors. HVM regulation. Hydrostatic transmissions - principle schemes, designs and regulation.			
12.	Study methods: Interactive lectures, practice, individual assignments, self learning.			
13.	Total hours	6 ECTS x 30 classes = 180 classes		
14.	Hours allocation per activity:	30 + 30 + 0 + 20 + 100 = 180 classes		

15.	Lectures/Lab	15.1.	Lectures	30 classes
		15.2.	Lab (student work)	30 classes
16.	Project Work/Assignments	16.1.	Project assignments	0 classes
		16.2.	Individual assignments	20 classes
		16.3.	Self-study	100 classes

17.	Points/Marks:		
17.1.	Tests		80 points
17.2.	Projects		0 points
17.3.	Attendance		10 + 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	None
20.	Language of Instruction	Macedonian
21.	Course evaluation	Student questionnaire

22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year
		1.	А. Ношпал	Хидраулични волуменски машини	МФС	2011
		2.				
		3.				
	22.2.	Supplemental Instruction Materials				
		No.	Author	Title	Publisher	Year

		1.	З. Костиќ	Хидраулични машини и уреди	Скрипта, МФС	1992
		2.	Т. М. Башта	Обемние насоси и гидравлические двигатели гидросистем	Машиностроение, Москва	1974