

Add. 3		Course program for the first, second and third level (cycle) of studies				
1.	Course title	3D Engineering				
2.	Code	101				
3.	Study group(s)	Plnf				
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	summer	7.	ECTS credits	6	
8.	Instructor	Prof D-r Atanas Kochov				
9.	Prerequisites	N/A				
10.	Course objectives (competences): Visual communication techniques; using computer tools and software for advanced graphic communication, understanding the concept and development skills for parametric solid modeling; 3D digitizing techniques.					
11.	Course content: Introduction, Tools, Techniques & processes involved in 3D computer design, application in the field of mechanical industry, commercial software packages for 3D Engineering; Opportunities, advantages and disadvantages; Visualization Techniques, model rendering; principles of visual perception; development of scientific visualization, integrated CAD / CAM / CAE system, 3D techniques					
12.	Study methods: Interactive lectures, exercises auditory and / or laboratory, individual and / or team working on project assignments, self-study.					
13.	Total hours		6 ECTS x 30 hours = 180 hours			
14.	Hours allocation per activity:		30 + 30 + 30 + 30 + 60 = 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	30 hours		
		16.3.	Self-study	60 hours		
17.	Points/Marks:					
	17.1.	Tests				70 points
	17.2.	Projects				20 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	Realized activity 17.2				
20.	Language of Instruction	Macedonian				
21.	Course evaluation	Student questionnaire				
22.	Textbooks					
	22.1.	Instruction materials				
		No.	Author	Title	Publisher	Year

		1.	A. Kochov	3D Engineering	Intern Script Faculty of Mechanical Engineering - Skopje	2009
		2.				
		3.				
		Supplemental Instruction Materials				
	22.2.	No.	Author	Title	Publisher	Year
		1.	J.Y.H.Fuh	Computer Aided injection mold design and manufacture	Hansen Publish.	2004
		2.				