Add. 3		Course prog	Course program for the first, second and third level (cycle) of studies								
1.	Course	title		Modeling tools with shaping							
2.	Code			216							
3.	Study g	roup(s)		PE							
4.	The organizer of the study program			Faculty of Mechanical Engineering - Skopje,							
	(unit, in	stitute, department)		Ss. Cyril and Methodius University in Skopje							
<u>5.</u>	Level (f	irst, second, third)									
<u>).</u>	Academic year / semester			Prof D r. Jasmina Caloska							
<u>).</u> 0	Prerequisites			Prot D-r Jasmina Caloska							
9. 10	Course	objectives (competenc	es).								
	Introduc innovat product	ction to the principles o ive technologies of virtu ion.	f integrated ual engineer	product and process or ring, virtual reality con-	developmen cept and its	t, application of application in					
11.	Course content: Basic principles of integrated development of products and processes, innovative technologies of virtual engineering, CAD / CAM / CAE systems for processing tools with shaping, numerical simulation of the processes of plastic deformation machining, construction and design tools for machining by molding with optimization of the technological parameters										
12.	Study methods: Interactive lectures, exercises auditory and / or laboratory, individual and / or team working on project assignments, self-study.										
13.	Total ho	ours		6 ECTS x 30 hours = 180 hours							
14.	Hours a	allocation per activity:		30 + 30 + 30 + 3	30 + 60 = 18	0 hours					
15.	Lecture	s/Lab	15.1	. Lectures		30 hours					
<u> </u>	<u> </u>		15.2	Lab (student work)	30 hours					
16.	Project Work/Assignments			5.1. Project assignments		30 hours					
			16.2	. Individual assignm	ndividual assignments						
			16.3	Self-study		60 hours					
17.	Points/Marks:										
	474										
	17.1.	Tests				70 points					
	17.1. 17.2.	Tests Projects				70 points 20 points					
	17.1. 17.2. 17.3.	Tests Projects Attendance				70 points 20 points 10 points					
18.	17.1. 17.2. 17.3. Grading	Tests Projects Attendance g scale		Unde	er 50	70 points 20 points 10 points 5 (five)	(F)				
18.	17.1. 17.2. 17.3. Grading	Tests Projects Attendance g scale		Unde 51 - 60 p	er 50 pints	70 points 20 points 10 points 5 (five) 6 (six)	(F) (E)				
18.	17.1. 17.2. 17.3. Grading	Tests Projects Attendance scale		Unde 51 - 60 po 61 - 70 po	er 50 pints pints	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven)	(F) (E) (D)				
18.	17.1. 17.2. 17.3. Grading	Tests Projects Attendance g scale		Unde 51 - 60 pr 61 - 70 pr 71 - 80 pr	er 50 pints pints pints	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight)	(F) (E) (D) (C)				
18.	17.1. 17.2. 17.3. Grading	Tests Projects Attendance g scale		Unde 51 - 60 pr 61 - 70 pr 71 - 80 pr 81 - 90 pr	er 50 points points points points points	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight) 9 (nine)	(F) (E) (D) (C) (B)				
18.	17.1. 17.2. 17.3. Grading	Tests Projects Attendance g scale	al ayam	Unde 51 - 60 pc 61 - 70 pc 71 - 80 pc 81 - 90 pc 91 - 100 pc	er 50 pints pints pints pints pints pints	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight) 9 (nine) 10 (ten)	(F) (E) (D) (C) (B) (A)				
18.	17.1. 17.2. 17.3. Grading Prerequ	Tests Projects Attendance g scale	al exam	Unde 51 - 60 po 61 - 70 po 71 - 80 po 81 - 90 po 91 - 100 po Realized activity 16.2	er 50 bints bints bints bints bints bints 2	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight) 9 (nine) 10 (ten)	(F) (E) (D) (C) (B) (A)				
18. 19. 20.	17.1. 17.2. 17.3. Grading Prerequ	Tests Projects Attendance g scale uisites for taking the fina ge of Instruction	al exam	Unde 51 - 60 pc 61 - 70 pc 71 - 80 pc 81 - 90 pc 91 - 100 pc Realized activity 16.2 Macedonian	er 50 pints	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight) 9 (nine) 10 (ten)	(F) (E) (D) (C) (B) (A)				
18. 19. 20. 21.	17.1. 17.2. 17.3. Grading Prerequ Langua Course	Tests Projects Attendance g scale uisites for taking the fin- ge of Instruction evaluation	al exam	Unde 51 - 60 pc 61 - 70 pc 71 - 80 pc 81 - 90 pc 91 - 100 pc Realized activity 16.2 Macedonian Student questionnair	er 50 pints pi	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight) 9 (nine) 10 (ten)	(F) (E) (D) (C) (B) (A)				
18. 19. 20. 21. 22.	17.1. 17.2. 17.3. Grading Prerequ Langua Course Textbo	Tests Projects Attendance g scale uisites for taking the fin- ge of Instruction evaluation	al exam	Unde 51 - 60 pc 61 - 70 pc 71 - 80 pc 81 - 90 pc 91 - 100 pc Realized activity 16.2 Macedonian Student questionnair	er 50 pints pi	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight) 9 (nine) 10 (ten)	(F) (E) (D) (C) (B) (A)				
18. 19. 20. 21. 22.	17.1. 17.2. 17.3. Grading Prerequ Langua Course Textbo	Tests Projects Attendance scale scal	al exam	Unde 51 - 60 pc 61 - 70 pc 71 - 80 pc 81 - 90 pc 91 - 100 pc Realized activity 16.2 Macedonian Student questionnair	er 50 pints pi	70 points 20 points 10 points 5 (five) 6 (six) 7 (seven) 8 (eight) 9 (nine) 10 (ten)	(F) (E) (D) (C) (A)				

	1.	J. Caloska	Modeling tools with shaping	Faculty of Mechanical Engineering - Skopje	2010		
	2.						
	3.						
	Supplemental Instruction Materials						
	No.	Author	Title	Publisher	Year		
	1.	Vesna Mandić	Virtual Engineering	/	2007		
22.2.	2.	Milan Jurković	Mathematical modeling and optimization of machining systems	Technical Faculty, Rijeka, Croatia	2004		
	3.	Vukota Boljanović	Sheet metal forming processes and die design	Industrial Press, New York	2004		