

Add. 3		Course program for the first, second and third degree of studies			
1.	Course title	Production planning and control			
2.	Code	254			
3.	Study group(s)	IEM			
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 degree)	First			
6.	Academic year / semester	Summer	7.	Number of ECTS credits	6
8.	Professor	Prof. Robert Minovski			
9.	Preconditions for enrolling the course	Production systems – signature			
10.	Purpose of the course program (competences): <ul style="list-style-type: none"> - Design of technology for conventional and modern machine-tools. - Norming and categorization of work, product cost calculation. - Management of production and services: process and resources planning, process management. 				
11.	Contents of the course program: <ul style="list-style-type: none"> - Description of basics for production planning, basics of design-constructive preparation: product lifecycle, research and development, basics of technological preparation: technological process and its elements, generalization of the phases for technology design, approaches for technology design: individual, type, group, technology processes on classic machines, technology processes on modern machines, technology processes for assembly, work categorization, technical norms, product cost calculation, technological documentation, activity automation, planning and managing the resources for production and services. - 				
12.	Study methods: Interactive teaching, Laboratory and/or in-class exercises, individual and/or team work on projects, self-study.				
13.	Total available time period	6 ECTS x 30 hours = 180 hours			
14.	Available time assessment	30 + 30 + 20 + 20 + 80 = 180 hours			
15.	Educational activity module	15.1.	Teaching lectures	30 hours	
		15.2.	Practice, seminars, team work	30 hours	
16.	Other activity module	16.1.	Project assignments	20 hours	
		16.2.	Selfrunning assignments	20 hours	
		16.3.	Home studying	80 hours	
17.	Evaluation methods				
	17.1.	Tests			90 points
	17.2.	Projects			
	17.3.	Activity and participation			10 points
18.	Evaluation criteria (points and marks)		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.	Signature and final exam requirements	Realized activity 16.2			
20.	Language used for performing the teaching	Macedonian language			

21.	Method used for following the teaching quality	Surveys and other forms of continuous evaluation
-----	--	--

22.	References				
22.1.	Main references				
	No.	Author	Title	Publisher	Year
	1.	Delco Jovanoski	Production systems (Production planning and control)	Faculty of Mechanical Engineering – Skopje	2012
	2.	Robert Minovski, Bojan Jovanoski	Manual with exercises for production systems (Production planning)	Faculty of Mechanical Engineering – Skopje	2009
	3.				
22.2.	Additional references				
	No.	Author	Title	Publisher	Year
	1.	H.E. Cook , L.A. Wissmann	Value Driven Product Planning and Systems Engineering	Springer-Verlag	2007
	2.	Michael L. Pinedo	Planning and Scheduling in manufacturing and Services	Springer-Verlag	2009
	3.				