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16.	**Other types of activities**	16.1.	Project assignments	10

Attachment No.3		**Course syllabus for First cycle studies**			
1.	**Course title**	**Technology of plastic deformation of metals**			
2.	**Code**	MDE7M2			
3.	**Study Program**	Metallurgical digital engineering			
4.	**Study program organizer (unit,institute, department, division)**	Faculty of Technology and Metallurgy, University "Ss. Cyril and Methodius" in Skopje			
5.	**Degree (first, second, third cycle)**	I cycle (undergraduate)			
6.	**Academic year / semester**	4 year, 7 semester	7.	**Number of ECTS**	5
8.	**Instructors**	D-r Ruzica Manojlovic, professor			
9.	**Prerequisites for courseenrollment**	Plastic deformation of metals			
10.	**Objectives of the course syllabus (competences):** The aim of the course is to give students basic knowledge of technology of plastic deformation of metal materials. **Acquired skills (competences):** Acquiring of basic knowledge of the technologies of plastic deformation of metal materials.				
11.	**Content of the course:** Basis of Technology of Plastic Deformation of Metals. Rolling. Theoretical Basis of Rolling Process. Characterization of Geometrical Changes in Rolling. Basic Technology of Rolling Process. Technology of Rolling with Plain Rolls. Technology of Hot Rolling. Technology of Cold Rolling. Technology of Rolling with Shaped Rolls. Technology of Pressing. Technology of Deep Drawing. Technology of Wire Drawing. Technology of Forging and Forging Pressing.				
12.	**Study methods:** Lectures and exercises, consultations, project (homework, seminar) assignments, home study (exam preparation)				
13.	**Total available time**	150			
14.	**Allocation of available time**				
15.	**Teaching activities**	15.1.	Lectures	45	
		15.2.	Exercises (laboratory, computational), teamwork	45	
		15.3	Industrial practice	10	
		16.2.	Independent assignments	-	
		16.3.	Home study	40	
17.	**Grading system**				
	17.1.	Tests: pts		80	
	17.2.	Seminar work/project, written and oral presentation: pts		10	
	17.3.	Final exam: pts		10	
18.	**Grading criteria (points/grade)**	Up to 61 points		5 (five) (F)	
		From 61 to 69 points		6 (six)	

			(E)
		From 70 to 79 points	7 (seven) (D)
		From 80 to 89 points	8 (eight) (S)
		From 90 to 95 points	9 (nine) (B)
		From 95 to 100 points	10 (ten) (A)

19.	**Prerequisites for taking the final exam**	Minimum 11 pts from activities 17.1 and 17.2
20.	**Language in which lectures are conducted**	English
21.	**Method for monitoring the quality of lectures**	Anonymous student survey

22. **LITERATURE**

22.1. Compulsory literature

No.	Author	Title	Publisher	Year
1.	R. Manojlovic	Plastic deformation of metals, I part	Internal material	2008
2.	R. Manojlovic	Plastic deformation of metals, II part	Internal material	2009
3.	R. Manojlovic	Plastic deformation of metals, workbook	Internal material	2008
4.	A. Służalec	Theory of metal forming plasticity: classical and advanced topics	Springer	2003

22.2. Additional literature

No.	Author	Title	Publisher	Year
1.	B. Altan	Severe plastic deformation	Nova Publishers	2006
2.	J.G. Lenard	Metal forming science and practice	Elsevier Science Ltd.	1989
3.	E. Romhanji	Mehanika i metalurgija deformacije metala	TMF, Beograd	2001