No. 27

Course syllabus for First cycle studies						
1.	**Course title**	**Ladle metallurgy**				
2.	**Code**	MDE8E5				
3.	**Study Program**	Metallurgical Digital Engineering				
4.	**Study program organizer (unit, institute, department, division)**	Faculty of Technology and Metallurgy				
5.	**Degree (first, second, third cycle)**	first				
6.	**Academic year / semester**	Fourth	7.	**Number of ECTS 5**	Eighth semester	
8.	**Instructors**	Dr. Goran Nachevski, full professor				
9.	**Prerequisites for course enrollment**					
10.	**Objectives of the course syllabus (competences):** The aim of the course is for students to gain theoretical knowledge about processes in ladle metallurgy. **Acquired skills (competences):**					
11.	**Content of the course:** Introduction to Off-Furnace Metallurgy; Aggregates; Modification and preparation of the electric arc furnace for off-furnace metallurgy; Equipment for off-furnace metallurgy; Technological processes (ASEA-SK and others); Alloying; Microalloying for mass production; A.O.D. and C.L.U. processes; Direct steel production; Puddling; Krupp process; Höganas process and other processes.					
12.	**Study methods:**					
13.	**Total available time**	150				
14.	**Allocation of available time**					
15.	**Teaching activities**	15.1.	Lectures - theoretical teaching. classes	30		
		15.2.	Exercises (laboratory, lecture), seminars, teamwork: classes	30		
		15.3.	Practice: classes	0		
16.	**Other types of activities**	16.1.	Project tasks: classes	15		
		16.2.	Independent tasks: lessons	15		
		16.3.	Homework - assignments	60		
17.	**Grading system**					
	17.1.	Tests: points		80		
	17.2.	Seminar paper/project, written and oral presentation: points		10		
	17.3.	Final exam: points		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**	
20.	**Language in which lectures are conducted**	
21.	**Method for monitoring the quality of lectures**	

22. **LITERATURE**

22.1. Compulsory literature

No.	Author	Title	Publisher	Year
1.	C.Moore. R.I.Marshall	Modern steelmaking methods	The Institution of Metallurgists, London	1980

22.2. Additional literature

No.	Author	Title	Publisher	Year
2.				
3.				