C O U R S E G U I D E – s h o r t f o r m

Academic year 2024-2025

Course name[1]	**METALLIC MATERIALS SMELTING METHODS**					Course code		3IPM03DS	
Course type[2]	DS	Category[3]	DI	Year of study	III	Semester	5	Number of credit points	6

Faculty	Materials Science and Engineering	Number of teaching and learning hours[4]					
Field	Materials Science	Total	L	T	LB	P	IS
Specialization	Materials Processing Engineering	150	42	-	14	14	80

Pre-requisites from the curriculum[5]	Compulsory	-
	Recommended	-

General objective [6]	Processing and design of metallic and nonmetallic loads inside and outside the smelting equipment, in order to obtain a ferrous melt, which could be used to obtain castings, according to the quality issues and economic efficiency.
Specific objectives[7]	The analysis of the technological processing flow of metallic and nonmetallic charges, inside and/or outside the smelting equipment, as appropriate, to obtain molten metallic iron or steel: heat preparation, smelting equipment preparation, loading, smelting, metal bath overheating, metallurgical treatment of metal bath (inside/ outside the smelting equipment), smelting discharge.
Course description[8]	1. Introduction. The history of metallic and nonmetallic loads processing, in order to obtain cast iron and steel. 2. Logical scheme of a ferrous alloy smelting flow. 3. Cast irons. Definition. Classification criteria. Grades. Cast iron smelting. 4. Steels. Definition. Classification criteria. Grades. Steel smelting.

Assesment			Sche-dule[9]	Percentage in the final grade (minimum grade)[10]
A. Final assessment form [11]: Exam	Class tests along the semester	%		50%
	Home works	%		
	Other activities	%		
	Examination procedures and conditions: oral exam, 2 subjects/exam ticket	100%	exam period	
B. Seminar	Activity during seminar			0%
C. Laboratory	Acttvity during laboratory			25 %
D. Project	Activity during project			25%

Course organizer	Lecturer PhD. Eng. Daniela Chicet	
Teaching assistants	Lecturer PhD. Eng. Daniela Chicet Asist. PhD Eng. Chereches Ionela	

[1]Course name from the curriculum

[2] DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

[3] DI – imposed, DO –optional, DL – facultative (from the curriculum)

[4] Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)
[5] According to 4.1 – Pre-requisites - from the Course guide – extended form
[6] According to 7.1 from the Course guide – extended form
[7] According to 7.2 from the Course guide – extended form
[8] Short description of the course, according to point 8 from the Course guide – extended form
[9] For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period
[10] A minimum grade might be imposed for some assessment stages
[11] Exam or colloquium