

COURSE GUIDE – short form

Academic year 2024 - 2025

Course name ¹	MATERIALS TECHNOLOGY 2				Discipline code	4 EPI 08			
Course type ²	DD	Category ³	DI	Year of study	4	Semester	8	Number of credit points	5

Faculty	Material Science and Engineering				Number of teaching and learning hours ⁴					
Field	Mechanical Engineering				Total	L	T	LB	P	IS
Specialization	EPI				125	28	14	-	-	83

Pre-requisites from the curriculum ⁵	Compulsory	
	Recommended	Chemistry, Physics, Study of materials

General objective ⁶	Study of technologies used for mechanical, thermal and thermochemical treatments for finalizing properties of the material to be exploited
Specific objectives ⁷	Knowledge, analysis, efficient design and effective and appropriate use of mechanical thermal treatments and thermochemical technologies used in the industry of machinery
Course description ⁸	I. Introduction. Properties of metallic materials. Classical mechanical processing. II. Corrosion of materials. Methods of corrosion protection. III. Controlled media for heating metallic materials. IV. Thermochemical treatments. V. Thin layers. VI. Technological plasmas. VII Processing of materials by welding. VIII. Powder processing.

Assessment		Schedule ⁹		Percentage of the final grade (minimum grade) ¹⁰
A. Final assessment form ¹¹ exam	Class tests along the semester	%	week	50 % (minimum 5)
	Home works	%		
	Other activities	%	week	
	Examination procedures and conditions: 1. Subject with open questions, working conditions oral, percent 100 %; 2. -, working conditions -, percent %; 3. -, working conditions -, percent %	100 % (minimum 5)	exam period	
B. Seminar	Activity during seminar		% (minimum 5)	
C. Laboratory	Activity during laboratory		50 % (minimum 5)	
D. Project	Activity during project		% (minimum 5)	
Course organizer	Lecturer Dumitru-Doru Burduhos-Nergiș, Ph.D. Eng.			
Teaching assistants	Lecturer Dumitru-Doru Burduhos-Nergiș, Ph.D. Eng.			

¹Course name from the curriculum

² DF – fundamental, DD – 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