

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	FUNCTIONAL LAYERS					Course code	MATAE IA 102		
Course type ²	DID	Category ³	DA	Year of study	I	Semester	1	Number of credit points	5

Faculty	MATERIALS SCIENCE AND ENGINEERING	Number of teaching and learning hours ⁴						
Field	MATERIALS ENGINEERING	Total	L	T	LB	P	IS	
Specialization	MATAE	125	14	-	14	-	97	

Pre-requisites from the curriculum ⁵	Compulsory	Material science
	Recommended	Physics

General objective ⁶	Assimilation of techniques for obtaining and analysis of functional layers
Specific objectives ⁷	<ul style="list-style-type: none"> • The theoretical understanding of the way in which the deposition of functional material is achieved • Practical assimilation of the methods and means of achieving the layers deposited by thermal spraying processes • Theoretical and practical assimilation of methods and means for characterization of the layers deposited by thermal spraying processes
Course description ⁸	Corrosion-resistant, wear-resistant deposits

Assesment			Schedule ⁹	Percentage in the final grade (minimum grade) ¹⁰
A. Final assessment form ¹¹ :	Class tests along the semester	%	-	60% (minimum 5)
	Home works	20%	6 th , 12 th week	
	Other activities	%	-	
	Exam	Examination procedures and conditions: 1. Treating a two subjects theoretic $p_1 = 35\%$; $p_2 = 35\%$; 2. Treating a subject practice $P = 30\%$.	80% (minimum 5)	
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Activity during laboratory			40% (minimum 5)
D. Project	Activity during project			% (minimum 5)

Course organizer	Professor Habil. PhD. Eng. Stefan Lucian TOMA
Teaching assistants	Professor Habil. PhD. Eng. Stefan Lucian TOMA

¹Course 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

⁹For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰A minimum grade might be imposed for some assessment stages

¹¹Exam or colloquium