

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	Vacuum deposition techniques II					Course code		MATAE IA 107	
Course type ²	DS	Category³	DI	Year of study	1	Semester	2	Number of credit points	4

Faculty	Materials Science and Engineering				Number of teaching and learning hours ⁴					
Field	Materials engineering				Total	L	T	LB	P	IS
Specialization	Advanced materials and experimental analysis techniques				100	28		14		58

Pre-requisites from the curriculum ⁵	Compulsory	-
	Recommended	Vacuum deposition techniques I

General objective ⁶	Acquiring and appropriate use of concepts and methods of making thin films deposited in vacuum
Specific objectives ⁷	Work Skills Training facility vacuum deposition, magnetron booked and evaporation; Gaining theoretical and practical methods, procedures and devices usual deposition of thin films; Gaining theoretical and practical methods and means of characterization of thin films deposited in vacuum; Identify applications of thin layers deposited by physical methods;
Course description ⁸	Methods, procedures and devices in vacuum thermal evaporation deposition; Methods, procedures and devices Sputter deposition; Ion plating deposition methods; Methods for chemical vapor deposition at low pressure; Monitoring and control of thin film vacuum deposition; Methods and means of surface analysis to determine the composition deposited layers; Methods and means for determining the structure of thin films deposited in vacuum; Methods and means for determining the thickness of thin films deposited in vacuum; Methods and means for determining adherence deposited layers; Methods and means for determining the corrosion resistance of the deposited layers; Applications of thin films deposited in vacuum by means of physical, chemical and physico-chemical;

Assesment			Schedule ⁹	Percentage in the final grade (minimum grade) ¹⁰
A. Final assessment form ¹¹ :	Class tests along the semester	30%	Week 9-10	70% (minimum 5)
	Home works	%	-	
	Other activities	%	-	
Exam	Examination procedures and conditions: Probe 1: Oral exam, 2 free questions	70% (minimum 5)		
B. Seminar	Activity during seminar			% (minimum 5)
C. Laboratory	Acttvity during laboratory			30% (minimum 5)
D. Project	Activity during project			% (minimum 5)

Course organizer	Ioan Gabriel SANDU
Teaching assistants	Ioan Gabriel SANDU

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

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