

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	Electro and Magnetorheological Materials				Course code	MATAE IA 208				
Course type ²	DID	Category ³	DO	Year of study	2	Semester	3	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	Advanced Materials and Experimental Analysis Techniques	125	28	14	14	-	69

Pre-requisites from the curriculum ⁵	Compulsory	
	Recommended	

General objective ⁶	The aim of this course is to convey practical information concerning the perspective of production, fabrication, processing, designing, laboratory study and utilization of electro and magnetorheological materials.
Specific objectives ⁷	Conveying fundamental knowledge concerning: <ul style="list-style-type: none"> • the functioning principles; • the microstructure; • the properties; • the main applications of electrorheological fluids and magnetorheological suspensions
Course description ⁸	General characterization of electrorheological fluids and magnetorheological suspensions from the point of view of their structure, functioning mechanisms, processing technology and applications.

Assesment			Schedule ⁹	Percentage in the final grade (minimum grade) ¹⁰
A. Final assessment form ¹¹ :	Class tests along the semester	%		60 %
	Home works	%		
	Other activities	%		
	Examination procedures and conditions: Probe 1: Grid test with 40 questions, each of them with 4 variants of answer among which only one correct 100%;	100 % (minimum 5)	Exam period	
B. Seminar	Activity during seminar			20 %
C. Laboratory	Activity during laboratory			20 %
D. Project	Activity during project			%

Course organizer	Prof.dr.ing. Leandru-Gheorghe BUJOREANU	
Teaching assistant	Prof.dr.ing. Leandru-Gheorghe BUJOREANU	

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