

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	ELECTRIC MACHINES AND DRIVES					Course code	3.ISI.10.DD-2		
Course type ²	DD	Category ³	DO	Year of study	3	Semester	5	Number of credit points	4

Faculty	Material Science and Engineering	Number of teaching and learning hours ⁴					
Field	Industrial engineering	Total	L	T	LB	P	IS
Specialization	Industrial safety engineering	100	28	-	28	-	44

Pre-requisites from the curriculum ⁵	Compulsory	-
	Recommended	Mathematical analysis, physics, electrotechnics

General objective ⁶	During the course students will acquire the technical knowledge necessary for the efficient use of the electric driving components in making the best driving diagram for the requirements of the driven equipment, in accordance with the costs afferent to its execution and efficient use
Specific objectives ⁷	<ul style="list-style-type: none"> • Basic laws of electrotechnics and mechanics applied in the study of the phenomena related to the electric driving machines and systems • General issues regarding the elements of the electric drive systems • Fundamental phenomena regarding the electric machines used in the positioning systems
Course description ⁸	The electric charge conservation law, the law of electromagnetic induction, choice of electric machines depending on the use conditions, basic constructive elements of the continuous current machines, basic constructive elements of the electrical transformers, basic constructive elements of the three-phase asynchronous machines

Assesment		Schedule ⁹	Percentage in the final grade (minimum grade) ¹⁰
A. Final assessment form ¹¹ :	Class tests along the semester	10%	60% (minimum 5)
	Home works	%	
	Other activities	%	
	Examination procedures and conditions: exam.oral Probe 1: working conditions; percent of the final grade %; Oral exam with topics from the theoretical part of the course.	90% (minimum 5)	
C. Laboratory	Activity during laboratory		40% (minimum 5)

Course organizer	Prof. PhD. Eng. Leandru-Gheorghe BUJOREANU
Teaching assistants	Prof. PhD. Eng. 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