

COURSE GUIDE – short form

Academic year 2024-2025

Course name ¹	Electrical Engineering and machines and electric drives				Course code	2.EPL10.DD			
Course type ²	DD	Category ³	DI	Year of study	II	Semester	4	Number of credit points	3

Faculty	Material Science and Engineering				Number of teaching and learning hours ⁴					
Field	Mechanical Engineering				Total	L	T	LB	P	IS
Specialization	Equipment for industrial processes				75	28	-	14	-	33

Pre-requisites from the curriculum ⁵	Compulsory	Mathematics, Physics
	Recommended	Using computer programs

General objective ⁶	Discipline "Electrical Engineering and machines and electric drives " aims to familiarize the SIM engineer with specific electrical engineering sizes, mathematical models used to study electric and magnetic circuits and methods for measuring electrical quantities.
Specific objectives ⁷	<ul style="list-style-type: none"> • The enunciation of concepts, theories and methods for carrying out basic work processes in conditions of safety and health at work, by identifying and assessing risks. • Use basic knowledge (concepts, theories, methods) for carrying out the work processes in conditions of safety and health at work, by identifying and assessing risks. • Following the discipline of Electrical Engineering SM students specialization acquire their skills on: proper and efficient use and operation of various electrical installation of transformers and electrical machines.
Course description ⁸	Self evaluation of safety in the industry. DC circuits, AC circuits of single-phase and three-phase circuits, magnetic, electrical, transformers and electrical machines.

Assesment		Schedule ⁹	Percentage in the final grade(minimum grade) ¹⁰
A. Final assessment form ¹¹ : Colloquium	Examination procedures and conditions: 1. Theoretical knowledge, tasks, share 70%; 2. Solving a problem, tasks, working conditions argumentation, share 30%.	The last week of the 2nd semester (week 14)	50% (minimum 5)
C. Laboratory	Activity during laboratory: The mandatory presence at the laboratory, active participation to experimental work (montages, calculations, graphics).		50% (minimum 5)

Course organizer	Lecturer Ph.D. Eng. Ursan Maria	
Teaching assistants	Lecturer Ph.D. Eng. Ursan Maria	

¹Course name from the curriculum

²DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³DI – imposed, DO – optional, DL – facultative (from the curriculum)

⁴Points 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)

⁵According to 4.1 –Pre-requisites - from the Course guide – extended form

⁶According to 7.1 from the Course guide – extended form

⁷According to 7.2 from the Course guide – extended form

⁸Short 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