COURSE GUIDE – short form

Academic year 2024-2025

Course name[1]	Elements of industrial electronics					Course code		4.ISI.01.DD	
Course type[2]	DID	Category[3]	DI	Year of study	4	Semester	7	Number of credit points	5

Faculty	Materials Science and Engineering	Number of teaching and learning hours[4]					
Field	Industrial Engineering	Total	L	T	LB	P	IS
Specialization	Security Engineering in Industry	125	28		14	-	83

Pre-requisites from the curriculum[5]	Compulsory	-
	Recommended	Electrotechnics

General objective [6]	Acknowledgement and appropriate use of theoretical concepts and practical elements of industrial electronics
Specific objectives[7]	Acquiring theoretical knowledge on semiconductor devices, amplifiers and the main types of electrical filters.
Course description[8]	1. Semiconductor devices 2. Operational amplifiers 3. Electrical filters 4. Voltage rectifiers 5. Inverters 6. Voltage variators 7. Standardization in industrial electronics 8. Protection and signaling circuits. Online demonstrative applications. 9. Sensors and transducers

Assesment			Sche-dule[1]	Percentage in the final grade (minimum grade)[2]
A. Final assessment form [3]: Exam	Class tests along the semester	%		60% (minimum 5)
	Home works			
	Other activities	%		
	Examination procedures and conditions: Solving theoretical subjects; written test, 100%	100% (mini-mum 5)	Sessi on	
C. Laborator	Activity during laborator			40% (minimum 5)

Course organizer	Silviu Ursache, Lecturer Ph.D.	
Teaching assistants	Gabriel-Ioan SANDU, Associate Prof. Ph.D.	

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

[2] A minimum grade might be imposed for some assessment stages

[3] Exam or colloquium

[1]Course 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