

Faculty of Metalurgy and Technology / CHEMICALL TECHNOLOGY / ELECTROTECHNICS AND ELECTRONICS

Course:	ELECTROTECHNICS AND ELECTRONICS								
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exer cises+Laboratory)					
324	Mandatory	3	4	2+2+0					
Programs	CHEMICALL TECHNOLOGY								
Prerequisites									
Aims									
Learning outcomes	Passing the exam in this subject implies that the student can: 1. Define the concept of electrostatic field and the basic quantities that describe it. 2. Define the concept of a linear electrical circuit and the basic laws that describe it (Ohms law, Joules law, Kirchhoffs laws) and solve a direct current circuit. 3. Describe phenomena in the magnetic field and their application. 4. Describe the behavior of resistors, coils, and capacitors in alternating current circuits. 5. Explain the operating principle and basic characteristics of transformers, asynchronous machines, and direct current machines. 6. Explain the operating principle of basic electronic elements and circuits. 7. Solve standardized problems and analyze the obtained solutions.								
Lecturer / Teaching assistant									
Methodology									
Plan and program of work									
Preparing week	Preparation and regis	tration of the semester							
I week lectures									
I week exercises									
II week lectures									
II week exercises									
III week lectures									
III week exercises									
IV week lectures									
IV week exercises									
V week lectures									
V week exercises									
VI week lectures									
VI week exercises									
VII week lectures									
VII week exercises									
VIII week lectures									
VIII week exercises									
IX week lectures									
IX week exercises									
X week lectures									
X week exercises									
XI week lectures									
XI week exercises									
XII week lectures									
XII week exercises									
XIII week lectures									



XIII week exe	ercises						
XIV week lec	tures						
XIV week ex	ercises						
XV week lect	tures						
XV week exe	ercises						
Student wo	orkload						
Per week		Per semester					
<pre>4 credits x 40/30=5 hours and 20 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises 1 hour(s) i 20 minuts of independent work, including consultations</pre>		Classes and final exam: 5 hour(s) i 20 minuts x 16 =85 hour(s) i 20 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 5 hour(s) i 20 minuts x 2 =10 hour(s) i 40 minuts Total workload for the subject: 4 x 30=120 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 24 hour(s) i 0 minuts Workload structure: 85 hour(s) i 20 minuts (cources), 10 hour(s) i 40 minuts (preparation), 24 hour(s) i 0 minuts (additional work)					
Student obligations							
Consultations							
Literature							
Examination methods							
Special remarks							
Comment							
Grade:	F	E	D	С	В	А	
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points	