

Faculty of Mechanical Engineering / MECHATRONICS / ELECTRICAL ENGINEERING

Course:	ELECTRICAL ENGINEERING			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
917	Mandatory	1	5	3+1+1
Programs	MECHATRONICS			
Prerequisites				
Aims				
Learning outcomes	After passing the exam in this subject, the student will be able to: 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 principles that describe it (Ohms law, Joules law, Kirchhoffs laws) and solve a direct current circuit. 3. Describe phenomena in the magnetic field and their applications. 4. Describe the behavior of resistors, inductors, and capacitors in an alternating current circuit. 5. Explain the operating principle and basic characteristics of transformers and asynchronous machines. 6. Explain the operation of basic electronic circuits. 7. Solve standardized problems and analyze the obtained solutions.			
Lecturer / Teaching assistant				
Methodology				
Plan and program of work				
Preparing week	Preparation and registration 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 exercises				

XIV week lectures						
XIV week exercises						
XV week lectures						
XV week exercises						
Student workload						
Per week		Per semester				
5 credits x 40/30=6 hours and 40 minuts 3 sat(a) theoretical classes 1 sat(a) practical classes 1 excercises 1 hour(s) i 40 minuts of independent work, including consultations		Classes and final exam: 6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts Total workload for the subject: 5 x 30=150 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) 30 hour(s) i 0 minuts Workload structure: 106 hour(s) i 40 minuts (courses), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)				
Student obligations						
Consultations						
Literature						
Examination methods						
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
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