

ELECTROTECHNOLOGY

1	Course Title:	ELECTROTECHNOLOGY
2	Course Code:	TEK2011
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	2
6	Semester:	3
7	ECTS Credits Allocated:	5.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	1
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. RECEP EREN
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	
17	Website:	
18	Objective of the Course:	To provide basic knowledge on electricity and magnetic field, to provide knowledge for electric and magnetic circuit analysis, to train student in understanding of working principles of transformers, dc motors, stepper motors, ac motors and servo motors, to train student in understanding of speed adjustment methods of dc motors, stepper motors, ac motors and servo motors, to provide knowledge on measurement systems and feedback control systems used with electric motors.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Being able to analyse electric and magnetic circuits
	2	Being able to apply electric and magnetic field knowledge to electric motor operation
	3	Being able to understand working principles and speed adjustment methods of electric motors
	4	Being able to select a suitable electric motor for a specific application
	5	Being able to understand basic structure and principle of operation of a feedback control system used with electric motors
	6	Being able to understand advantages gained by textile technology by use of individual electric motors in textile machinery
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21	Course Content:	
	Course Content:	

Week	Theoretical	Practice
1	Electric circuit basics, electric circuit analysis	Laboratory studies
2	Electric circuit analysis	Laboratory studies
3	Magnetic field and basic notions regarding magnetic field	Laboratory studies
4	Magnetic circuit analysis	Laboratory studies
5	Direct current motors	Laboratory studies
6	Direct current motors	Laboratory studies
7	Step motors	Laboratory studies
8	Step motors	Laboratory studies
9	Alternating current motors	Laboratory studies
10	Alternating current motors (Midterm exam)	Laboratory studies
11	Alternating current motors	Laboratory studies
12	Servo motors	Laboratory studies
13	Speed and position measurement methods	Laboratory studies
14	Feedback control systems used with motors	Laboratory studies

22	Textbooks, References and/or Other Materials:	1-R. EREN, Instructor prepared handouts "Electrotechnology", (in Turkish). 2-A.Hamdi SAÇKAN, Electric Machinery, Vol.III: Asencron Motors, Mart 1981, İZMİR (in Turkish). 3-Austin HUGHES, Elektrik Motors and Drives, Heinemann Newnes Publ. Company, Oxford, 1990.
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Activites		Number	Duration (hour)	Total Work Load (hour)
TERM LEARNING ACTIVITIES				
Theoretical	14	2.00	28.00	
Practicals/Labs	14	1.00	14.00	
Self study and preperation	0	5.00	70.00	
Homeworks	0	0.00	0.00	
Final Exam	1	0.00	0.00	
Projects	0	0.00	0.00	
Field Studies	0	0.00	0.00	
Contribution of Term (Year) Learning Activities to Success Grade	40	14.00	14.00	
Others	0	0.00	0.00	
Contribution of Final Exam to Success Grade	60	24.00	24.00	
Total Work Load			150.00	
Total workload of Evaluation Techniques Used in the Course			5.00	
ECTS Credit of the Course			5.00	

24 ECTS / WORK LOAD TABLE

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	2	3	4	4	0	2	0	0	3	0	0	0	0	0	5
ÖK2	5	3	4	5	5	0	2	0	0	3	0	0	0	0	0	5
ÖK3	5	2	3	4	4	0	1	0	0	3	0	0	0	0	0	5
ÖK4	5	4	4	5	5	0	3	0	0	3	0	0	0	0	0	5

ÖK5	4	2	3	4	4	0	1	0	0	3	0	0	0	0	0	5
ÖK6	4	2	3	4	4	0	1	0	0	3	0	0	0	0	0	5
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							