AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Electrical Machines and Control						
Course Code	MTR110		Couse Level	Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	98 *(Hours)*	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	With this course, students, electrical machines to recognize, control elements and control circuit elements operation of one-phase and three-phase asynchronous motors using, change direction of rotation, braking operations are intended to understand.						
Course Content	working principles of ac and dc electrical electric machines, all control and power systems used in the operation of one-phase and three-phase motors and working principles of the elements used in these systems						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods			Explanation (Presentation)				
Name of Lecturer(s)							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

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Week	Weekly Detailed Course Contents	
1	Theoretical	ac machines
2	Theoretical	dc machines
3	Theoretical	Control Elements Protection Relays
4	Theoretical	Three-phase asynchronous motors cut and continuous operation
5	Theoretical	Three Phase Asynchronous Motors Run From Two Different Locations (Remote)
6	Theoretical	Changing the direction of rotation in three-phase asynchronous motors
7	Theoretical	Three-Phase Asynchronous Motor Resistance Starting Rotor Winding Asynchronous Motor Starting
8	Intermediate Exam	Midterm
9	Theoretical	Three-Phase Asynchronous Motors with Reactance and Auto Transformer Start-up Three-Phase Asynchronous Motor Braking
10	Theoretical	Three-Phase Asynchronous Motors Star Triangle Start
11	Theoretical	One Phase Asynchronous Motor Control Circuits
12	Theoretical	Rotation Direction Change in One Phase Asynchronous Motors
13	Theoretical	Direct current motors
14	Theoretical	Direction of rotation in direct current motors
15	Final Exam	final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	0	3	39
Lecture - Practice	13	0	1	13
Individual Work	8	0	3	24
Midterm Examination	1	10	1	11

Final Examination	1	10	1	11
			Total Workload (Hours)	98
			[Total Workload (Hours) / 25*] = **ECTS**	4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Ac and dc electrical machines recognition
2	3-phase asynchronous motors to explain the cut and continuous operation.
3	Three-phase asynchronous motors to change the direction of rotation required to install the control circuit.
4	3-phase asynchronous motors to tell the resistance circuit.
5	Three phase asynchronous motors with reactance and auto transformer to make the process.
6	To be able to explain the direction of rotation in one-phase asynchronous motors.

Programme Outcomes *(Mechatronics)*

1	TECHNICAL FOREIGN LANGUAGE
2	BASICS OF MECHATRONICS
3	TECHNICAL DRAWING
4	DOING BASIC MECHANIC PROSESES
5	CHOOSE THE MATERIALS
6	DOING MECHANICAL SYSTEM DESIGN
7	SET UP A HYDRAULİC OR PNEUMATICSYSTEMS
8	DOING COMPUTER AIDED MECHANICAL DESİGN
9	USINGFLEXIBLE PRODUCING SYSTEMS
10	USINGCOMPUTER AIDEDMACHINE TOOLS
11	DOING ELECTRICAL AND ELECTRONICAL
12	SET UP ELECTRICAL AND ELECTRONICAL CIRCUITS
13	SET UP LOGICAL CIRCIUTS
14	DOING COMPUTER AIDED ELECTRONICAL CIRCUITSDESİGN
15	SET UP ELECTRICAL MOTORS
16	SET UP MICROCONTROLLER CIRCIUTS
17	SET UP CONTROL SYSTEMS
18	COMMUNICATE CONTROL SYSTEMS
19	DOING INDUSTRIAL ROBOTIC PROGRAMMINGAND MAINTENANCE
20	WRITING COMPUTER PROGRAMME
21	Ability to use the methods and techniques of career planning and discussing the effects of character traits on career preferences.
22	Ability to plan a career in their own profession.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5	L6
P12	5	5	5	5	5	5
P15	5	5	5	5	5	5
P17	3	4	3	4	3	4