AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Hyraulic and Pneumatic								
Course Code	OTE254		Couse Level		Short Cycle (Associate's Degree)				
ECTS Credit	5	Workload	125 *(Hours)*	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	In this course, students learn the hydraulic-pneumatic circuit elements on the circuit systems, maintenance and repair of looms building .								
Course Content	Recognize the elements of the hydraulic circuit, hydraulic circuit diagram to create, Detecting faults in hydraulic systems, hydraulic malfunctions Troubleshooting ,Identify pneumatic circuit elements, creating pneumatic circuit diagram, electro-pneumatic systems, to create, to create electro-pneumatic systems, pneumatic systems to detect failures Troubleshooting Faults air, make periodic checks of systems Make periodic maintenance of the systems, making the detection of the fault, repair of the faulty machine.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Individual Study								
Name of Lecturer(s)	Ins. Cemal GÖVEN, Ins. İsmail MERSİNKAYA								

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Hidrolik Akışkan Gücü-FAtih Özcan-Mert Eğitim Yayınları
2	Hidrolik-Pnömatik FESTO -Yayınları

Week	Weekly Detailed Course Contents	
1	Theoretical	Recognize the elements of the hydraulic circuit
2	Theoretical	Create Hydraulic Circuit Diagram
3	Theoretical	Detecting faults in hydraulic systems
4	Theoretical	Troubleshooting Power Failures
5	Theoretical	Identify pneumatic circuit elements
6	Theoretical	Create Pneumatic Circuit Diagram
7	Theoretical	Create electro-pneumatic systems
8	Theoretical	Create electro-pneumatic systems
9	Theoretical	Pneumatic systems to identify failures
10	Theoretical	Pneumatic Troubleshooting Faults
11	Theoretical	Systems to make periodic checks
12	Theoretical	Periodic maintenance of the systems do
13	Theoretical	Make Fault Detection
14	Theoretical	Repair of the Faulty machine
15	Theoretical	Repair of the Faulty machine

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	3	45
Lecture - Practice	15	0	1	15
Assignment	9	0	4	36
Studio Work	9	0	3	27
Midterm Examination	1	0	1	1

Final Examination	1	0	1	1
			Total Workload (Hours)	125
			[Total Workload (Hours) / 25*] = **ECTS**	5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Transactions related to hydraulic systems
2	Transactions related to pneumatic systems
3	Basic maintenance and repair of looms
4	To identify elements in drawn circuits and interpretation of running circuits
5	To be able to select elements for a new designed circuit and construct circuit

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
P7	5	5	5	5	5