AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Hydraulic and Pneumatic								
Course Code	MKE211		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	4	Workload	100 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	It is aimed to gain the competencies related to the formation of circuit systems with hydraulic-pneumatic circuit elements and maintenance-repair of the looms.								
Course Content	Hydraulic and pneumatic systems and components.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Problem Solving								
Name of Lecturer(s)	Ins. Alpaslan BAŞARIK								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Hidrolik ve Pnömatik Ders Notları

Week	Weekly Detailed Course Contents	
1	Theoretical	To Learn Hydraulic Circuit Elements
2	Theoretical	Creating Hydraulic Circuit Schemes
3	Theoretical	Detecting Malfunctions of Hydraulic Systems
4	Theoretical	Applying Hydraulic Malfunctions
5	Theoretical	To Learn Pneumatic Circuit Elements
6	Theoretical	Creating a Pneumatic Circuit Diagram
7	Theoretical	Creating Electropneumatic Systems
8	Theoretical	Creating Electropneumatic Systems
9	Intermediate Exam	Midterm Examination
10	Theoretical	Detecting Malfunctions of Pneumatic Systems
11	Theoretical	Applying Pneumatic Defects
12	Theoretical	Periodic Control of Systems
13	Theoretical	Perform Periodic Maintenance of Systems
14	Theoretical	Making Fault Detection
15	Theoretical	Repairing the defective machine
16	Final Exam	Final Examination

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Lecture - Practice	14	0	1	14
Project	16	0	2	32
Midterm Examination	1	5	1	6
Final Examination	1	5	1	6
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = **ECTS**	4
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To carry out operations related to hydraulic systems
2	Recognition of hydraulic elements and circuits

3	To carry out operations related to pneumatic systems
4	Recognition of pneumatic elements and circuits
5	Do basic maintenance and repairs of benches

Programme Outcomes *(Machinery)*	
1	To be able to know general properties and usage areas of industrial materials and make selection.
2	Design of machine elements.
3	To be able to make production using machining and welding machines without machining.
4	To be able to make measurement and quality control processes with machine tools for measuring and control equipment.
5	To be able to make necessary corrections in order to determine the mistakes by using the necessary non-destructive test methods in welded parts and to eliminate these mistakes.
6	Preventive measures to prevent the occurrence of these faults by preliminarily determining the faults that will occur in the machines as statistical data and to make necessary interventions in case of breakdown.
7	They can make drawings of work pieces on CAD station and apply them on CNC looms. Ability to operate and use CAD / CAM and AUTOCAD package programs.
8	To be able to transfer engineering science and technology to practice by making calculations in the direction of scientific principles.
9	It can repair the elements in pneumatic and hydraulic systems which are indispensable elements of automatic control systems and can regulate their work.
10	The student who is trained as a machine technician during the whole program knows that industrial task definition in the field of work is error finding, problem solving, decision making, planning of functions and activities and they can be achieved by aiming to acquire these characteristics.

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

	L1	L3	L5
P1	5	5	5
P2	5	5	5
P3	5	5	5
P4	5	5	5
P5	5	5	4
P6	5	5	4
P7	5	5	4
P8	5	5	4
P9	5	5	5
P10	5	5	5