AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Manufacturing Processes - I								
Course Code	MKE108		Couse Level		Short Cycle (Associate's Degree)				
ECTS Credit	5	Workload	125 *(Hours)*	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	In the manufacturing workshop, it is aimed to open the motion screws according to the standards by using the lathe, to make special turning operations and to gain the proficiency of flat and helical gearing by using milling machine.								
Course Content	Features of machine technology, basic turning operations on lathe, basic milling operations on milling machine, abrasive stones, non-removable joining.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Individual Study								
Name of Lecturer(s)	Assoc. Prof. Ali Kemal ÇAKIR								

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

Recommended or Required Reading	
1	Akkurt,M,(2004) Talaş Kaldırma Yöntemleri ve Takım Tezgahları, İstanbul,
2	Metal Meslek Bilgisi, MEB DERS ARAÇLARI: -Makine atölyesi tezgâh, takım ve araç-gereçleri

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition and properties of square screws, Square screw opening techniques
2	Theoretical	Square screwdrivers, Square screwdriver
3	Theoretical	Definition and properties of trapezoidal screw, Trapezoidal screw opening techniques
4	Theoretical	Trapezoidal screwdrivers, Trapezoidal cutters connection to the loom
5	Theoretical	Round screw definition and properties, Round screw opening
6	Theoretical	Circular screw cutters, Cutter joining to the loom
7	Theoretical	Definition and properties of multi-threaded screws, Multi-threaded threading
8	Theoretical	Multi-threaded screw cutters, Cutters' joining to the loom
9	Intermediate Exam	MIDTERM
10	Theoretical	Definition of springs, their properties, types, areas of use Spring calculation, bow winding
11	Theoretical	Definition of misaligned center turning, Marking, Tolerance measurement and control
12	Theoretical	Definition and types of beds, Usage areas of beds
13	Theoretical	Custom Turning Operations
14	Theoretical	Definition of flat gear wheel and usage places, Flat gear wheel calculations
15	Theoretical	Helical gear wheel definition and usage places, Helical gear wheel manufacturing techniques, Helical gear wheel calculations
16	Final Exam	FINAL EXAM

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Term Project	16	0	2	32
Studio Work	5	0	5	25
Midterm Examination	1	5	1	6

Final Examination	1	5	1	6
			Total Workload (Hours)	125
			[Total Workload (Hours) / 25*] = **ECTS**	5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To be able to make motion rules
2	To do special turning operations
3	To open the straight gear
4	To open the helical gear
5	Universal milling apparatus using split looms, manufacture of gear to make looms,

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	L2	L3	L4	L5
P1	4	5	4	5	4
P2	4	5	4	5	4
P3	4	5	4	5	5
P4	4	5	4	5	2
P5	5	4	4	4	5
P6	4	4	4	4	4
P7	5	4	5	4	5
P8	3	5	5	4	5
P9	5	4	5	5	5
P10	5	4	5	5	4