AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Cnc Milling Technology						
Course Code	MKE204		Couse Level	Short Cycle (Associate's Degree)			
ECTS Credit	6	Workload	150 *(Hours)*	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	It is aimed to gain competencies to prepare CNC milling machine for work, program writing and production.						
Course Content	Features, parts and working principles of CNC milling machine, Programming principles in CNC Milling machines, Simulation.						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods		Explanation (Presentation), Demonstration, Case Study, Individual Study					
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	CNC Programlama ve Endüstriyel Uygulamalar

Week	Weekly Detailed Course Contents	
1	Theoretical	Features, parts and working principles of the CNC milling machine
2	Theoretical	Machine coordinate axes, Reference points, Control panel types, Cutter and workpiece relation
3	Theoretical	Cutter types, properties and usage places
4	Theoretical	Zero points on parts, Cutting depth, operating angle
5	Theoretical	Programming principles in CNC milling machines
6	Theoretical	CNC milling machines
7	Theoretical	Definition and importance of simulation, Simulation programs, Running programs
8	Theoretical	Programming using CNC milling cycles, Rectangular pocket milling cycle
9	Intermediate Exam	Midterm Examination
10	Theoretical	Programming using CNC milling cycles, Circular pocket milling cycle
11	Theoretical	Programming using CNC milling cycles, Drilling cycle, Tapping cycle,
12	Theoretical	Subprogramming technique, Subprogramming structure
13	Theoretical	Programming using CNC milling subprogram
14	Theoretical	Alarm options available on CNC milling looms
15	Theoretical	Measurement and control
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
Assignment	10	0	4	40
Project	10	0	4	40

Reading	1	0	2	2
Midterm Examination	1	5	1	6
Final Examination	1	5	1	6
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Preparing the CNC Milling Countertop
2	Writing program for CNC Milling Bench
3	Making production at CNC Milling
4	Apply different manufacturing methods at CNC Milling
5	Understand the importance of manufacturing quality and control.

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	5	4	5	5	4
P2	5	5	5	5	5
P3	5	5	5	5	4
P4	4	4	5	5	5
P5	4	4	4	5	5
P6	4	4	4	5	1
P7	4	5	5	5	2
P8	4	5	5	5	5
P9	5	5	4	5	5
P10	4	5	4	5	4