AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Computer Controlled Machine Tuals						
Course Code	OTE212		Couse Level	Short Cycle (Associate's Degree)			
ECTS Credit	4.5	Workload	112 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	n this course, CNC Lathe and CNC Milling Machine programmable work The aim of this course is to gain competence of machining parts.						
Course Content	Basic features of CNC lathes, used programming and codes used in the program, measurement systems and simulation program.						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods			Explanation (Presentation), Individual Study, Problem Solving				
Name of Lecturer(s)							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	CNC PROGRAMMING AND INDUSTRIAL APPLICATIONS Ahmet CAN
2	CNC PROGRAMMING Murat YILMAZ

Week	Weekly Detailed Course Contents	
1	Theoretical	CNC lathe, CNC lathe, who has spent parts of the found properties, principles of work, CNC turning, who has spent over the coordinate axes, reference points, control panel, Control panel keys and features, the cutter and workpiece material relationship
2	Theoretical	Cutter types, properties and applications, linking the team compensated settings, the zero elements, Parts and tooling points, Resetting reset Qty. to handle the elements used in the features, track team
3	Theoretical	Elements and properties used in the team, giving the angle and the depth of cut, process advances, on the team depth account, rough handling Binding apparatus, control tools, workpiece Binding reset methods, fundamentals of programming of CNC turning looms a.Positioning systems,
4	Theoretical	a. Operation and commands that help prepare commands, b., c. custom commands, CNC lathe stands and motion systems, coordinate systems, types of shapes, Movement Control, axes
5	Theoretical	CNC programming using a) facing the tornado cycles cycle, b) Longitudinal rough turning cycle c) Radius chamfer cycle d) grooving cycle to cycle the channel f) rough translation) on your profile Space g) deep hole drilling cycle h) threading cycle, the lower the lower structure of the CNC programming technique, using the lower program programming programming services
6	Theoretical	The definition and importance of simulation, simulation programs, run programs, CNC looms in the alarm options
7	Theoretical	Error codes used in programming, the unit of measure and control instruments over the progress of the mode settings, measurement control equipments, measuring instruments of measuring and control Any influencing factors, the purpose of measuring and Control equipment for measuring, errors that may occur and causes,
8	Theoretical	Comparison of measuring systems and measuring instruments, measurement, measuring, clocks and comparators, surface roughness, flatness and roundness, Straightness measurement, CNC milling machine, CNC milling, who has spent parts of the found properties, CNC milling machine working principles, who has spent over the coordinate axes, reference points, control panel, Control panel keys and properties
9	Theoretical	Relationship between the cutter and workpiece material, cutting varieties, properties and applications, linking the team compensated settings, the zero elements, Parts and tooling points, used elements in resetting properties
10	Theoretical	Reset Qty. to handle track team, the team used in setting the depth of cut, the operation element and the properties, the angle and the depth of the Team resulted in roughing account, Binding apparatus, control tools, workpiece Binding reset methods, fundamentals of programming CNC milling machine looms a) positioning systems,

11	Theoretical	a) processing and preparation commands special commands commands that help b), c) CNC milling machine looms motion systems, coordinate systems, types of shapes, Movement Control, axes
12	Theoretical	CNC milling, Groove milling cycles by using the conversion of b Rectangle mobile programming a)) circular Pocket machining cycle c) Hole drilling cycle d) tapping cycle e) Hole expansion cycle, Lower the bottom Groove milling programming CNC programming technique, using the lower program structure, programming
13	Theoretical	CNC milling, Groove milling cycles by using the conversion of b Rectangle mobile programming a)) circular Pocket machining cycle c) Hole drilling cycle d) tapping cycle e) Hole expansion cycle, Lower the bottom Groove milling programming CNC programming technique, using the lower program structure, programming
14	Theoretical	CNC milling, Groove milling cycles by using the conversion of b Rectangle mobile programming a)) circular Pocket machining cycle c) Hole drilling cycle d) tapping cycle e) Hole expansion cycle, Lower the bottom Groove milling programming CNC programming technique, using the lower program structure, programming
15	Theoretical	Error codes used in programming, the unit of measure and control instruments over the progress of the mode settings, measurement control equipments, measuring instruments of measuring and control Any influencing factors, the purpose of measuring and control equipment for measuring, errors that may occur and causes, the measure comparing, measuring instruments and systems, flatness, Linearity and Measurement times and comparators, measuring roundness, surface roughness,

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	2	30
Lecture - Practice	15	0	2	30
Term Project	1	30	0	30
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
			Total Workload (Hours)	112
			[Total Workload (Hours) / 25*] = **ECTS**	4.5

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Knows the control panel keys on the CNC lathe and recognizes the axes
2	Learn the coordinate systems in CNC lathe. Learns reference points.
3	Learn preparation commands in CNC lathe. Learns special commands and cycles
4	Preparing the CNC lathe,
5	To have knowledge of writing a machining program on a CNC lathe machine.
6	Production in CNC lathe machine,
7	Preparing the CNC milling machine for work,
8	Write the program for CNC milling machine
9	CNC milling machine to make production

Programme Outcomes (Automotive Technology)

1	Using the basic knowledge and skills acquired in his/her field of study, to have the ability to evaluate and interpret the data, to define and analyze the problems, to make solution suggestions based on evidence and proofs.
2	To choose and use efficiently contemporary techniques and means as well as information technologies required for the applications related to the field of study.
3	The ability to apply the processes related to industrial and service sector by examining.
4	To gain the ability to produce solutions to unforeseen situations, take responsibility in teams and to have the skill to conduct individual works.
5	To achieve an awareness of the necessity of lifelong learning and consistently self-improving besides of following the developments in science and technology.
6	To become skillful at using computer hardware and software in a baseline level required by the field of study.
7	To be aware of Business Law, Job Security, environmental protection and quality concepts.
8	To have a command of communication skills and foreign language in order to communicate efficiently and follow the latest developments in his/her field of study.
9	Acquiring enough conceptual and applied knowledge in Mathematics, Science and Basic Engineering issues related to his/her field.

10	To plan the processes in automotive technology field to meet the expectations of the sector.
11	To become skillful at making designs by means of technical and computer-aided drawings and simulation programs, and by using various software programs to be able to choose systems and components required in by the field apart from making the basic sizing computations and drawing the architectural and static projects and details.
12	Ability to use the methods and techniques of career planning and discussing the effects of character traits on career preferences.
13	To provide them with knowledge about substance use and addiction problem and prevention methods.

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	L7	L8	L9
P1	5	5	5	4	5	4	5	5	4
P2	5	5	5	5	5	5	5	5	5
P3	5	5	5	5	3	4	4	3	4
P4	4	4	4	5	4	3	3	4	3
P5					3	4	4	3	4
P6	4	4	4	5	5	4	4	5	4
P7				4		3	3		3
P8					2			2	
P9	2	2	2	2					
P10	3	3	3	4	1	4	4	1	4
P11	5	5	5	5	5	5	5	5	5