



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Basic Machine Knowledge							
Course Code		MKE180		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Introduction of Basic Machines Giving the solution approach of the problems related to machine design Teaching basic machine subjects Developing the ability to work in teams							
Course Content		Historical development of machines, Professional ethics, Introduction to the work done by machine makers in general, Basic concepts in machine, Classification of machine elements in general, Simple Strength Calculations, Machine tools and their work.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Discussion, Case Study, Individual Study, Problem Solving					
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	Basic Machine Knowledge Course Notes
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Week	Weekly Detailed Course Contents	
1	Theoretical	Machining as a Profession.
2	Theoretical	Energy and Machinery. Dimensions, Units and Error
3	Theoretical	Unit analysis, unit transformations and related applications
4	Theoretical	Description of measurement and control issues, introduction of used measuring instruments
5	Theoretical	Caliper as dimension measuring instruments, micrometer and dial gauge Infinitives as instruments. Measure reading applications with caliper and micrometer
6	Theoretical	Connecting elements, welding connections, Solder connections, Bonding connections, Bolt connections
7	Theoretical	Professional and ethical responsibility explaining to have
8	Theoretical	National and international standards and quality organizations. Standard and Definition of quality.
9	Intermediate Exam	midterm
10	Theoretical	Entrepreneur and self-confidence of students explaining
11	Theoretical	Engineering service national and global have knowledge about the dimensions
12	Theoretical	Industrial rights, intellectual property rights, patent licensing
13	Theoretical	Science and technology policy
14	Theoretical	Machine Design
15	Theoretical	Visiting an industrial organization, Manufacturing



16	Final Exam	Final Exam
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**Workload Calculation**

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	1	28
Assignment	5	0	3	15
Midterm Examination	1	3	1	4
Final Examination	1	2	1	3
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = <b>ECTS</b>				2

\*25 hour workload is accepted as 1 ECTS

**Learning Outcomes**

1	Mathematics, science and engineering related fields sufficient knowledge of the issues; theoretical and apply practical knowledge to modeling engineering problems and ability to apply for solving.
2	Realistic complex system, process, device or product under certain conditions and conditions, ability to design in a way; modern design for this purpose the ability to apply methods.
3	Designing experiments to investigate engineering problems, conducting experiments, collecting data, analyzing results and interpretation skill
4	Awareness of the necessity of lifelong learning; information accessing, monitoring developments in science and technology; and self-renewal ability.
5	Awareness of professional and ethical responsibility
6	To introduce the basic level of material knowledge, measurement methods, machine parts and machine tools used in part production.

**Programme Outcomes (Automotive Technology)**

1	To be able to interpret and evaluate data, identify problems, analyze them, and develop evidence-based solutions by using basic knowledge and skills in the field.
2	Must be able to choose and effectively use the modern techniques, tools and information technologies necessary for field related applications.
3	Must be able to gain practical skills by examining relevant processes in industry and service sector on site.
4	They must be able to produce solutions, take responsibility for teams or do individual work when they encounter situations unforeseen in the field related applications.
5	Awareness of the need for lifelong learning; it must be able to follow the developments in science and technology and to constantly renew itself.
6	Must be able to use computer software and hardware at the basic level required by the field
7	Must have job security, worker health, environmental protection knowledge and quality awareness.
8	He must possess a level of foreign language knowledge that is capable of following the innovations in his area of expertise and communication techniques.
9	Must be able to acquire basic theoretical and practical knowledge about the field in mathematics, science and basic engineering.
10	It should have the ability to plan the processes / processes of the Automotive Program to meet the expectations of the sector.
11	To be able to design the systems and components related to the field by using technical drawing, computer aided drawing, designing using simulation programs and using various softwares, to be able to make basic sizing calculations, to be able to master professional plans and projects.

**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
P1	2	3	3	3	2	3
P2	5	3	3	2	2	3
P3	2	1	3	3	3	2
P4	3	2	3	2	3	2
P5	3	2	3	3	2	2

