



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Applications of Mathematics							
Course Code		MKE190		Couse Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Mathematical competence, application of thinking patterns (logical and spatial thinking) and presentation (formulas, models, structures, graphs, diagrams) are aimed to develop skills.							
Course Content		Numbers, Algebra, Problems, Logical Ability, Geometry							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Discussion, Problem Solving					
Name of Lecturer(s)		Assoc. Prof. Murat ÜNVERDİ							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Applications of Mathematics Lecture Notes
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Week	Weekly Detailed Course Contents	
1	Theoretical	Basic Concepts (Numbers), Rational Numbers and Decimal Fractions, Number Systems and Step Concept
2	Theoretical	Prime Factors and Exact Divisor Number, Divide and Divide Rules
3	Theoretical	Factorial, Obeb and Okek
4	Theoretical	Equation Solving
5	Theoretical	Simple Inequalities and Sorting, Absolute Value
6	Theoretical	Exponential Numbers, Square Root Numbers, Factorization and Identities
7	Theoretical	Ratio Proportion
8	Theoretical	Number, Fraction, Page, Hour, Age, Percentage, Profit and Loss, Interest, Mixture, Speed and Movement, Worker and Pool Problems
9	Intermediate Exam	Mid-term Exam
10	Theoretical	Sets, Functions
11	Theoretical	Modular Arithmetic
12	Theoretical	Permutation, Combination, Possibility
13	Theoretical	Digital Logic
14	Theoretical	Geometric Concepts, Line Angles, Polygons and Rectangles
15	Theoretical	Circle, Analytical Geometry, Solid Bodies
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	14	0	1	14
Midterm Examination	1	3	1	4
Final Examination	1	3	1	4
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = ECTS				2
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Learn the theory and applications of numbers.
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2	Learn the theory and applications of algebra.
3	Learn the theory and applications of problems.
4	Learn the theory and applications of logical ability.
5	Learn the theory and applications of geometry.

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	4	3	4	4
P2	3	4	5	3	3
P3	5	4	4	5	2
P4	4	4	3	4	5
P5	3	4	4	3	4
P6	4	4	4	4	3
P7	5	4	3	5	4
P8	3	4	5	3	5
P9	2	4	3	4	4
P10	4	4	4	3	3

