



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Measurement and Control							
Course Code		ÜKK105		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	5	Workload	125 (<i>Hours</i>)	Theory	3	Practice	1	Laboratory	0
Objectives of the Course		In this course; It is aimed to gain qualifications of measurement and control of parts produced by manufacturing methods.							
Course Content		Introduction to Measurement, Basic Dimensions of Measurement, Definitions, Error, International Validity of Measurement, Application Fields of Measurement in Tolerance, Tolerance Information, Exercise Information, ISO Exercises, Local Tolerance Conditions, Measuring Angle and Taper, Measuring Screws, Measuring Gear Wheels, Macrogeometric of Surfaces and Micrometric Measurement, Mechanical, Electrical, Electronic, Pneumatic, Optical, Ultrasonic and Magnetic Measurement and Measurement							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study					
Name of Lecturer(s)		Lec. Yüksel AYDOĞAN							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	35
Final Examination	1	40
Practice	1	15
Assignment	1	10

Recommended or Required Reading

1	Lecture Notes
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Week	Weekly Detailed Course Contents	
1	Theoretical	calipers
2	Theoretical	micrometer
3	Theoretical	Angle measurement
4	Theoretical	Surface roughness measurement
5	Theoretical	Measuring screws
6	Theoretical	Measuring gears
7	Intermediate Exam	Midterm
8	Theoretical	Surface inspection with gauges and optical glass
9	Theoretical	Check the shape tolerance
10	Theoretical	Check the shape tolerance
11	Theoretical	Dimension tolerance control
12	Theoretical	Dimension tolerance control
13	Theoretical	Measurement with touch digitizers
14	Theoretical	Measurement with optical digitizing devices
15	Theoretical	Digital data control and verification
16	Final Exam	Semester final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Lecture - Practice	14	0	1	14
Assignment	2	12	0	24
Practice Examination	6	0	3	18
Midterm Examination	1	12	1	13



Final Examination	1	13	1	14
Total Workload (Hours)				125
[Total Workload (Hours) / 25*] = ECTS				5
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Recognize the measuring instruments and knows the basic features.
2	Can measure with caliper and micrometer.
3	Be able to measure angle.
4	Be able to measure surface roughness.
5	Can measure the screw threads.
6	Can measure gears.
7	Surface inspection with gauges and optical glasses.
8	Shape and size tolerance control.
9	Has sufficient information about the factors affecting the measurement.

Programme Outcomes (Quality Control in Production)

1	To be able to be bounded to the Atatürk nationalism, adopted to the national, ethic, spiritual and cultural value of the Turkish Nation, opened to the universal and modern development, adopted the richness, deep seated and productive properties of the Turkish language, having language sympathy and awareness, having reading pleasure and habit and having sufficient foreign language for their vocational necessities, In the directions of the Atatürk Principles and Revolutions,
2	To be able to comprehend social, cultural and societal responsibility and keep up with national and international up contemporary issues and developments.
3	Utilizes together mathematics, science and theoretical and applied knowledge in their field for engineering solutions.
4	Determines, identifies formulizes and solves the problems. For this purpose selects and applies analytical methods and modeling techniques.
5	Selects and utilizes the necessary modern techniques and equipment for industrial applications.
6	Designs and performs experiments, collects data and analyzes and elaborates results.
7	Works effectively as an individual or in multidisciplinary teams.
8	Collects information and makes literature survey for this purpose, utilizes databases and other information sources.
9	Be aware of lifelong learning; follows the developments in science and technology and continuously renews himself.
10	Analyzes and designs under realistic constraints a system, a system component or a process for meeting the required needs, for this purpose applies modern design methods.
11	Acquires professionalism and ethical responsibility in the profession.
12	Communicates by using technical drawing and manufacturing knowledge.
13	Be aware of the universal and social effects of industrial solutions and applications; is aware of entrepreneurship and innovation and has idea about the problems of the era.
14	Has knowledge about quality assurance and standardization and possess skills of execution of operations. In the same time, has the professional and ethical responsibility.
15	Is conscious of project management, business administration, health of the workers, environment and work safety; is aware of the legal consequences of industrial applications.

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
P3	2	2	2	2	2	2	2	2	1
P5	4	4	4	4	4	4	4	4	3
P6	2	2	2	2	2	2	2	2	2
P9	4	4	4	4	4	4	4	4	3
P14	1	1	1	1	1	1	1	1	1

