AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Reverse Engineering and Quality Control						
Course Code	MKE206		Couse Level	Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 *(Hours)*	Theory	1	Practice	1	Laboratory	0
Objectives of the Course	It is aimed to gain qualification to make quality control and reverse engineering applications.						
Course Content	Reverse Engineering, Establishment of System for 3D Optical Measurement, Calibration, Scanning, Scanning, Optimization of Data, Quality Control						
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	Tersine Mühendislik ve Kalite Kontrol Kitabı

Week	Weekly Detailed Course Contents	
1	Theoretical	Establishment of 3D optical measuring system
2	Theoretical	Calibration
3	Theoretical	Scanning
4	Theoretical	Scanning
5	Theoretical	Optimizing Data
6	Theoretical	Reverse Engineering
7	Theoretical	Reverse Engineering
8	Theoretical	Quality Control
9	Intermediate Exam	Midterm Examination
10	Theoretical	Quality Control
11	Theoretical	Establishment of system for photogrammetric measurement
12	Theoretical	Positioning of auxiliary equipment
13	Theoretical	Shooting
14	Theoretical	Digitizing photos
15	Theoretical	Exporting points
16	Final Exam	Final Examination

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	1	14
Lecture - Practice	14	0	1	14
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
			Total Workload (Hours)	50
			[Total Workload (Hours) / 25*] = **ECTS**	2

25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	3D Optical Measurement
2	Making Photogrammetric Measurements
3	Be able to scan and optimize data

4	To be able to control the quality
5	To be able to shoot and digitize photographs

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