



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Rezerve Engineering							
Course Code		OTE158		Couse Level		Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	3	Practice	1	Laboratory	0
Objectives of the Course		The aim of the course is to gain qualifications of quality control and reverse engineering applications.							
Course Content		Reverse Engineering, 3D Optical Measurement, Calibration, Scanning, Optimizing Data, Quality Control.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Case Study, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Reverse Engineering: An Industrial Perspective von Vinesh Raja,Kiran Jude Fernandes, Springer-Verlag London Limited 2008
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Week	Weekly Detailed Course Contents	
1	Theoretical	Theoretical 3D Optical Measurement 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	Theoretical	Quality control
10	Theoretical	Setting up the system for photogrammetric measurement
11	Theoretical	Setting up the system for photogrammetric measurement
12	Theoretical	Shooting
13	Practice	Digitizing photos
14	Theoretical	Exporting points
15	Theoretical	Exporting points

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	2	30
Lecture - Practice	15	0	2	30
Assignment	8	0	2	16
Term Project	2	8	2	20
Midterm Examination	1	1	1	2
Final Examination	1	1	1	2
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To know the general properties and usage areas of industrial materials
2	Design of machine elements.



3	To be able to produce by using machining, chipless welding machine and welding machines.
4	To be able to perform measurement and quality control operations with measurement and control instruments for machine technology.
5	To make non-destructive control in welded production and to prevent mistakes.
6	To be able to make periodic maintenance and adjustment of machines
7	CAD parts of work pieces, CNC machine tools can make drawings. To be able to run and use CAD / CAM and AUTOCAD package program

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

