



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Engine and Test Settings							
Course Code		OTE204		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	100 ( <i>Hours</i> )	Theory	3	Practice	1	Laboratory	0
Objectives of the Course		Students will be able to practice on engine performance characteristics, parameters on the vehicle.							
Course Content		In this course, students learn the characteristics of the engine performance and can analyze the parameter and the efficiency of engines.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Individual Study, Problem Solving					
Name of Lecturer(s)		Lec. Erman AYDIN							

### Assessment Methods and Criteria

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

### Recommended or Required Reading

1	1. Megep Ders Notları
2	2. www.obitet.gazi.edu.tr

Week	Weekly Detailed Course Contents	
1	Theoretical	Physical Controls Engine Systems, Cooling and Lubrication Systems
2	Theoretical	Ignition Systems and Controls
3	Theoretical	Diagnostic Devices
4	Theoretical	Tester Diagnostic Cables and Connections
5	Theoretical	Scanning Engine Systems Failure
6	Theoretical	ECU (Electronic Control Unit)
7	Theoretical	Trouble Codes
8	Theoretical	Memory Ecu Clearing Faults
9	Theoretical	Vehicle Display Systems and Controls Mechanisms of the valve, Variable Valve Timing Engine Tests (Power, torque, fuel consumption, air
10	Theoretical	Consumption, Specific fuel consumption, Volumetric Efficiency, Thermal Efficiency) Engine Tests (Power, torque, fuel consumption,
11	Theoretical	The Diagnostic Test Device Controls
12	Theoretical	Solenoid valve control Air consumption, specific fuel consumption, Volumetric Efficiency, Thermal Efficiency) Vehicle Tests
13	Theoretical	Sensor Controls
14	Theoretical	The Controls Lubrication Line
15	Theoretical	The Controls Lubrication Line

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	3	45
Lecture - Practice	15	0	1	15
Assignment	5	0	2	10
Project	14	0	2	28
Midterm Examination	1	0	1	1



Final Examination	1	0	1	1
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	The student knows the terminology of engine performance, and comments the engine parameters influencing performance.
2	The student knows the importance of industrial engines to be tested. Know the types of testing instruments and testing.
3	Student test with engine failures and apply for exploration and troubleshooting
4	Learns types of gasoline engine ignition system. Knows and performs the standard ignition system malfunctions.
5	Electronic ignition system, recognizes the elements. Detects and removes faults.
6	Knows fuel injection systems and elements of gasoline engines, can detect and eliminate faults.
7	Knows the fuel system components of hydromechanical fuel injection diesel engines and can eliminate their faults.
8	ECU-controlled diesel fuel injection systems, components, and can find and fix faults.

### 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	L8
P1	5	3	3	4	3	3	3	5
P2	4	4	4	4	4	4	4	4
P3	3	3	3	4	3	3	3	3
P4	3	1	1	4	1	1	1	1
P5	2	3	3	3	3	3	3	3
P6	4	4	4	4	4	4	4	4
P9	3	2	2	3	2	2	3	2
P10				3				
P11	3	4	4	4	4	4	4	4

