



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Diesel Engines And Fuel Injection Systems							
Course Code		OTT102		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		In this course, it is aimed to make maintenance and repair of diesel fuel injection systems							
Course Content		In this course students of automotive department can carry out all kinds of maintenance, repair and control operations that can be done with the help of technology in diesel motor vehicles.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Individual Study					
Name of Lecturer(s)		Ins. Mehmet TEMEL							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Ahmet Kayan- Diesel Engines- Yüce Publications-2003
2	Fahrettin Küçükşahin-Diesel Engines-Beta Publications-Istanbul 2008
3	www.obitet.gazi.edu.tr (www.obitet.gazi.edu.tr is)
4	www.megep.meb.gov.tr

Week	Weekly Detailed Course Contents	
1	Theoretical	Fuel System (Fuel Depot, Feed Pump, Fuel Pipes, Filter
2	Theoretical	Overfilling Systems, Reasons for Using Overfill Systems in Internal Combustion Engines
3	Theoretical	Types of Overfilling Systems Used in Diesel Engines
4	Theoretical	Mechanical Overfill (Super Charge), Excess Turbo Compressor Overfill
5	Theoretical	Intercooler System
6	Theoretical	Fuel Injection Pumps, Sequential Fuel Injection Pump
7	Theoretical	D.P.A. Type Pump
8	Theoretical	Electronic Fuel System
9	Intermediate Exam	Midterm
10	Theoretical	Common Rail Diesel Injection System
11	Theoretical	Sensors working with Common Rail Diesel Injection System
12	Theoretical	Injectors
13	Theoretical	Controlled and Adjusted Injectors
14	Theoretical	Diesel Engines Electronic Control Units
15	Theoretical	Diagnos Device
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	5	0	1	5
Term Project	5	0	1	5
Laboratory	5	0	2	10
Reading	10	0	1	10
Quiz	2	0	1	2
Midterm Examination	1	5	1	6



Final Examination	1	5	1	6
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Know and interpret the basic working principles of diesel engines.
2	He recognizes diesel engines as construction.
3	Know the diesel fuel injection system.
4	By knowing and analyzing the systems that make up the diesel engine, problems can be solved.
5	Diesel engine parts on the fault search, troubleshooting methods, and to be able to learn.

Programme Outcomes (Automotive Technology)

1	To be able to interpret and evaluate data, identify problems, analyze them, and develop evidence-based solutions by using basic knowledge and skills in the field.
2	Must be able to choose and effectively use the modern techniques, tools and information technologies necessary for field related applications.
3	Must be able to gain practical skills by examining relevant processes in industry and service sector on site.
4	They must be able to produce solutions, take responsibility for teams or do individual work when they encounter situations unforeseen in the field related applications.
5	Awareness of the need for lifelong learning; it must be able to follow the developments in science and technology and to constantly renew itself.
6	Must be able to use computer software and hardware at the basic level required by the field
7	Must have job security, worker health, environmental protection knowledge and quality awareness.
8	He must possess a level of foreign language knowledge that is capable of following the innovations in his area of expertise and communication techniques.
9	Must be able to acquire basic theoretical and practical knowledge about the field in mathematics, science and basic engineering.
10	It should have the ability to plan the processes / processes of the Automotive Program to meet the expectations of the sector.
11	To be able to design the systems and components related to the field by using technical drawing, computer aided drawing, designing using simulation programs and using various softwares, to be able to make basic sizing calculations, to be able to master professional plans and projects.

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

