AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Emission and Control Systems								
Course Code	OTE208		Couse Level		Short Cycle (Associate's Degree)				
ECTS Credit	3	Workload	75 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	This course is intended to be able to practice reducing harmful emissions from vehicles.								
Course Content	In this course, students learn what emissions. Exhaust gas from internal combustion engines, Take measures to protect against damage of these emissions.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Individual Study								
Name of Lecturer(s)	Ins. Etem SAÇMACIOĞLU								

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
3	Emisyon Kontrol Sistemleri Dersi Ders Notları

Week	Weekly Detailed Course Contents	
1	Theoretical	Fuels
3	Theoretical	Exhaust Emissions
4	Theoretical	Emissions Measurement
5	Theoretical	Effects of Diesel Engine Emissions Vehicles Working Conditions at
6	Theoretical	Effects of motor vehicles and LPG Gas Emissions Working Conditions at
7	Theoretical	Motor Vehicles Emissions Reduction Systems
8	Theoretical	2 and 3-way catalytic converter, particulate filter
9	Theoretical	Crankcase Ventilation System
10	Theoretical	EGR System
11	Theoretical	Effects of EGR Emission System
12	Theoretical	Technological Advances in Diesel Fuel Injection systems
13	Theoretical	Carbon canister valve
14	Theoretical	Additional Air Exhaust Systems
15	Theoretical	Additional Air Exhaust Systems

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	2	30
Assignment	2	0	8	16
Studio Work	9	0	3	27
Midterm Examination	1	0	1	1
Final Examination	1	0	1	1
			Total Workload (Hours)	75
			[Total Workload (Hours) / 25*] = **ECTS**	3
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Understand the general information about Liquids (gasoline and diesel) and gas (natural gas, LPG, hydrogen) fuels,
2	Knows the basic concepts of combustion and combustion types (theoretical complete combustion, incomplete combustion and partial incomplete combustion)
3	All kinds of products of combustion and pollutant emissions resulting from the combustion of fuel calculated to comprehend.
4	Catalytic converters and particulate filters, operating principles, characteristics and control knowledge and application procedures.
5	Fuel vapor recovery systems, operating principles, characteristics and application of knowledge and control operations.

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