AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Heating-Cooling Systems								
Course Code	OTT210		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	2	Workload	50 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course is to make maintenance and repair of heating and cooling systems.								
Course Content	In this course; controls, adjustments and repairs of the elements in the vehicle's air conditioning system learn how to do.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Project Based 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	Auto Air Conditioning Systems / Megep lecture notes

Week	Weekly Detailed Course Contents	
1	Theoretical	Air Conditioning Compressors
2	Theoretical	Evaporator, Condenser
3	Theoretical	Air Conditioning Hoses, Air Conditioning Control Panel
4	Theoretical	Gas Leak Testing Equipment, Air Conditioning Gases
5	Theoretical	Air Conditioning Pressure Sensor
6	Theoretical	Outside Air Temperature Sensor, Indoor Air Temperature Sensor
7	Theoretical	Heater Motors
8	Theoretical	Heating Radiators
9	Intermediate Exam	Midterm
10	Theoretical	Air Direction Valve Motors
11	Theoretical	Heating Elements
12	Theoretical	Heater Control Panel
13	Theoretical	blowers
14	Theoretical	Relays
15	Theoretical	Relays
16	Final Exam	Semester final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Studio Work	5	1	2	15
Midterm Examination	1	2	1	3
Final Examination	1	3	1	4
			Total Workload (Hours)	50
			[Total Workload (Hours) / 25*] = **ECTS**	2
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Air conditioner compressor, Evaporator radiator and throttle valve, Condenser radiator and moisture trap filter, air conditioner hose and records, control the air conditioning control panel will be able to change.
2	Air conditioning gas leak test will be able to do. Will be able to control and replace the air conditioning pressure sensor.
3	Will be able to discharge and refill the air conditioning system. Will be able to control and change the outdoor air temperature sensor. Internal control air temperature sensor.
4	Heater engine, heater radiator, air guiding valve motors and heater control panel, heater resistance, heating resistance, heating relay, air routing hoses and blowers will be able to control.
5	Will be able to control, maintain and repair all parts of the cooling system.

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