



AYDIN ADNAN MENDERES UNIVERSITY
SÖKE VOCATIONAL SCHOOL
ELECTRICAL AND ENERGY
ALTERNATIVE ENERGY SOURCES TECHNOLOGY
COURSE INFORMATION FORM

Course Title	Cooling System Drafting								
Course Code	AET204			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	5	Workload	120 (Hours)	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	In this course it is aimed that students acquire necessary competencies in order to set up domestic type cooling systems which means basic mechanic compressive cooling circuit.								
Course Content	Determining cabin mounting elements, determining cooling mechanic/electrical circuit elements, preparing mounting skeleton, mounting compressor, mounting condenser, mounting evaporator, mounting filter/dryer, mounting capillary tube, making thermic relay connection, making capacitor connection, making thermostat and fan connection, determining cooling fluid/ Pressure leaking test, vacuuming the system, charging the cooling fluid, making circuit electric connection, running the circuit, adjusting thermostat, measuring heat-pressure-flow values, drawing P-h diagram of cooling circuit, calculating heat capacity of cooling elements								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Individual Study								
Name of Lecturer(s)	Cemal GÖVEN								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Cooling Technique Volume: 1-Uğur Köktürk
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Week	Weekly Detailed Course Contents	
1	Theoretical	Determining cabin mounting elements determining cooling mechanic/electrical circuit elements
2	Theoretical	preparing mounting skeleton
3	Theoretical	mounting compressor
4	Theoretical	mounting condenser
5	Theoretical	mounting evaporator
6	Theoretical	mounting filter/dryer mounting capillary tube
7	Theoretical	making thermic relay connection making capacitor connection
8	Theoretical	making thermostat and fan connection
9	Theoretical	determining cooling fluid/ Pressure leaking test
10	Theoretical	vacuuming the system charging the cooling fluid
11	Theoretical	running the circuit, adjusting thermostat
12	Theoretical	measuring heat-pressure-flow values
13	Theoretical	drawing P-h diagram of cooling circuit
14	Theoretical	calculating heat capacity of cooling elements

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	3	56
Lecture - Practice	14	0	1	14
Term Project	7	4	0	28
Midterm Examination	1	10	1	11



Final Examination	1	10	1	11
Total Workload (Hours)				120
[Total Workload (Hours) / 25*] = ECTS				5
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Making mounting preparation
2	Mounting main circuit elements of cooling
3	Mounting electric circuit elements
4	Charging cooling fluid Running cooling circuit
5	Evaluating working performance of cooling circuit

Programme Outcomes (Alternative Energy Sources Technology)

1	Carry out installing work
2	Do mechanical drawing
3	Do pipe welding
4	Do basic electricity works
5	Do Computer assisted design
6	Install solar energy hot water preparation system.
7	Do measurement and calculations practices.
8	Do basic practices of geothermal energy.
9	Install control and automation system.
10	Install domestic water heating system with solar energy.
11	Generate electricity with solar energy
12	Generate electricity with wind power
13	Do geothermal energy practices
14	Install domestic cooling system
15	Do heating pump practices
16	Manage a business
17	SET UP A WORKPLACE/ BUSINESS (pre-requisite)
18	OBEY VOCATIONAL ETHICAL VALUES
19	RESEARCH AND EVALUATION/OBSERVATION
20	SELFIMPROVEMENT WITH USING INFORMATION FACILITIES
21	Knows the effects of all energy sources on the environment.
22	Can communicate in a foreign language

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P14	5	5	5	5	5

