



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

Course Title	Residential Solar Heating Systems-II								
Course Code	AET205			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	100 (Hours)	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	With this course students are expected to have a competences of planning of domestic heating systems with solar energy, choosing elements and mounting them, mounting control system of installment and maintenance and repair.								
Course Content	Calculating heat loss for unit area, determining device, deciding pipe diameters for heating installment, preparing mounting place for heater, mounting heater stabilization elements, hanging the heater, making valve connections of the heater, mounting thermostat, mounting receptor elements, mounting control valve, repairing the installment, solve active element faults								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Individual Study								
Name of Lecturer(s)	Ins. Baybars DAL								

#### Assessment Methods and Criteria

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

#### Recommended or Required Reading

1	Güneş Enerjisi ve Uygulamaları(Doç.Dr.Hüseyin Öztürk)
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Week	Weekly Detailed Course Contents	
1	Theoretical	Calculating heat loss for unit area
2	Theoretical	determining device
3	Theoretical	deciding pipe diameters for heating installment
4	Theoretical	preparing mounting place for heater
5	Theoretical	mounting heater stabilization elements
6	Theoretical	hanging the heater
7	Theoretical	, making valve connections of the heater
8	Theoretical	, mounting thermostat
9	Theoretical	mounting receptor elements
10	Theoretical	mounting control valve
11	Theoretical	repairing the installment
12	Theoretical	repairing the installment
13	Theoretical	solve active element faults
14	Theoretical	solve active element faults

#### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	3	56
Lecture - Practice	14	0	1	14
Term Project	1	8	0	8
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

\*25 hour workload is accepted as 1 ECTS

#### Learning Outcomes

1	Identifying heating installment circuit elements
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2	Mounting heater
3	Setting up control system
4	Making maintenance and repair
5	Makes a home heating account

**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
P6	4	4	4	4	4
P9	5	5	5	5	5

