



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

Course Title	Residential Solar Heating Systems-I								
Course Code	AET108			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	99 (Hours)	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	With this course planning of domestic heating systems with solar energy, choosing elements and mounting them installment, mounting control system and maintenance and repair.								
Course Content	Determining system working method, identifying components type and sizes, choosing a place for components, drawing installment schema on an architectural plan, finding redirection and slope angle, designing load bearing skeleton, stabilizing collector, mounting water tank and floater, mounting extra heating, mounting collector circuit pump, mounting domestic water circulation pump, fixing heat changer, making installment connections.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, Problem Solving								
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	Determining system working method
2	Theoretical	identifying components type and sizes
3	Theoretical	choosing a place for components
4	Theoretical	drawing installment schema on an architectural plan
5	Theoretical	finding redirection and slope angle
6	Theoretical	designing load bearing skeleton
7	Theoretical	stabilizing collector
8	Theoretical	mounting water tank and floater
9	Theoretical	mounting extra heating
10	Theoretical	mounting collector circuit pump
11	Theoretical	mounting domestic water circulation pump
12	Theoretical	mounting domestic water circulation pump
13	Theoretical	fixing heat changer
14	Theoretical	making installment connections

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	3	56
Lecture - Practice	14	0	1	14
Term Project	1	7	0	7
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
Total Workload (Hours)				99
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Identifying type of system and components
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2	Making mounting plan according to building and business type
3	Mounting collector
4	Mounting water tank
5	Mounting the pump
6	Mounting heat changer

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	L6
P6				4	4	
P10	5	5	5	5		4
P15					5	5

