



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

Course Title	Electric Production Aided Solar Energy								
Course Code	AET202			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 students are expected to acquire following competencies; familiarize with electric generation system from solar power, determine system capacity, mounting and testing the system.								
Course Content	Making load analysis, identifying type and power of solar cell, forming photovoltaic array, determining mounting place, defining redirection and slope angle, designing load bearing skeleton, fixing PV panels, making electrical connections and tests of PV panels, calculating the number of batteries, making charge regulator connection, forming battery groups, defining inverter capacity, making inverter connection, making network inputs and outputs, install counter group.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration								
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	Photovoltaic Technology-Hüseyin Öztürk
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Week	Weekly Detailed Course Contents	
1	Theoretical	Making load analysis
2	Theoretical	identifying type and power of solar cell
3	Theoretical	forming photovoltaic array
4	Theoretical	determining mounting place
5	Theoretical	defining redirection and slope angle
6	Theoretical	designing load bearing skeleton fixing PV panels
7	Theoretical	making electrical connections and tests of PV panels
8	Theoretical	calculating the number of batteries
9	Theoretical	making charge regulator connection
10	Theoretical	forming battery groups,
11	Theoretical	defining inverter capacity
12	Theoretical	making inverter connection
13	Theoretical	making network inputs and outputs
14	Theoretical	install counter group.

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	Defining the number of solar panels and batteries.
2	Mounting PV panels Mounting batteries Mounting inverter
3	Mounting network connections and counter group.
4	Makes a solar panel account
5	Comprehends Solar Panel and Wind Hybrid.

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
P4	3	3	3	3	3
P7	4	4	4	4	4
P11	5	5	5	5	5

