

AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

| Course Title | Residental Solar Heating Systems-II | | | | | | |
|---|--|------------------|--------------------------------|----------------------------------|-------------------|------------|---|
| Course Code | AET205 | Couse Level | | Short Cycle (Associate's Degree) | | | |
| ECTS Credit 4 | Workload 100 (Hours) | Theory | 3 | Practice | 1 | Laboratory | 0 |
| Objectives of the Course | 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. | | | | systems ht and | | |
| 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, maki valve connections of the heater, mounting thermostat, mounting receptor elements, mounting control valve, repairing the installment, solve active element faults | | | allment, , making ontrol | | | | |
| Work Placement N/A | | | | | | | |
| Planned Learning Activities | and Teaching Methods | Explanation (Pre | esenta | tion), Demonst | ration, Individ | ual Study | |
| Name of Lecturer(s) Ins. Baybars DAL | | | | | | | |

Assessment Methods and Criteria

| Method | Quantity | Percentage (%) | |
|---------------------|----------|----------------|--|
| Midterm Examination | 1 | 40 | |
| Final Examination | 1 | 70 | |

Recommended or Required Reading

1 Güneş Enerjisi ve Uygulamaları(Doç.Dr.Hüseyin Öztürk)

| Week | Weekly Detailed Cours | 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 | |
| | 100 | | | | |
| | 4 | | | | |
| | | | | | |

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1 Identifying heating installment circuit elements



| 2 | Mounting heater | |
|---|-------------------------------|--|
| 3 | Setting up control system | |
| 4 | Making maintenance and repair | |
| 5 | Makes a home heating account | |
| | | |

| Progra | amme 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 EVALUA0TION/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 |
| 23 | Ability to use the methods and techniques of career planning and discussing the effects of character traits on career preferences. |
| 24 | Ability to plan a career in their own profession. |
| 25 | To produce solutions by using the laws of physics in the use or design of tools-machines or devices related to the profession. |
| 26 | To provide them with knowledge about substance use and addiction problem and prevention methods. |
| | |

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 |

