AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Power Electronic I						
Course Code	ELE213		Couse Level	Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	In this course, it is aimed to have the students gain the abilities and knowledge about semiconductor switch elements, redresor and chopper circuit applications.						
Course Content	Usage of monophase and triphase redresor circuits, thyristor, triac and invertors						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Problem Solving						
Name of Lecturer(s)	Ins. İsmail MERSİNKAYA						

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Power electronics(Prof.Dr.Hacı Bodur)

Week	Weekly Detailed Course Contents	
1	Theoretical	Thyristors
2	Theoretical	Thyristor Triggering Circuits
3	Theoretical	Triac and Diac and Mosfets
4	Theoretical	Monophase Redresor Circuits Without Control
5	Theoretical	Monophase Redresor Circuits Without Control
6	Theoretical	Triphase Redresor Circuits Without Control
7	Theoretical	Triphase Redresor Circuits With Control
8	Theoretical	Invertors
9	Theoretical	Invertors
10	Theoretical	Invertors
11	Theoretical	Invertors
12	Theoretical	Invertors
13	Theoretical	Invertors
14	Theoretical	Invertors

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	3	1	1	6
Midterm Examination	1	7	1	8
Final Examination	1	7	1	8
			Total Workload (Hours)	50
		[Total Workload (Hours) / 25*] = **ECTS**		2

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Determining semiconductor switch elements
2	Installing redresor circuits
3	Connecting the invertors to the circuit
4	Establishes transistor circuit

5	Calculates the semiconductor circuit elements.

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 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
P4	3	3	3	3	3
P10	3	3	3	3	3
P15	3	3	3	3	3