AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Direct Current Curcuits					
Course Code		ELE105		Couse Level		Short Cycle (Associate's Degree)	
ECTS Credit	4	Workload	100 *(Hours)*	Theory	3	Practice	1	Laboratory	0
Objectives of the Course		In this course, it is aimed to have the students gain the abilities and knowledge about making dc circuit solutions and calculations.					
Course Content		Static electric concepts, circuit solving methods, thevenin norton, nodule voltages, kirschoff laws, side current, power and energy in DC, storage elements.					
Work Placement		N/A					
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Problem Solving			
Name of Lecturer(s)		Ins. Serkan ARTAN					

Assessment Methods and Criteria

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

Recommended or Required Reading

1	DC Circuit Analyses (Murat Ceylan)
2	DC Circuit Analyses((Abdullah Görkem –Metin Kuş)

Week	Weekly Detailed Course Contents	
1	Theoretical	Static Electric
2	Theoretical	Static Electric, Taking Precautions Against the Unpredictable Effects of Electric Current
3	Theoretical	Taking Precautions Against the Unpredictable Effects of Electric Current, Circuit Solutions in DC
4	Theoretical	Circuit Solutions in DC, Side Currents Method
5	Theoretical	Side Currents Method
6	Theoretical	Nodule Voltage Method
7	Theoretical	Source Connections, Theve'nin Theorem
8	Theoretical	Theve'nin Theorem, Norton Theorem
9	Theoretical	Superposition Theorem, Maximum Power Theorem
10	Theoretical	Maximum Power Theorem, Storage Elements in DC
11	Theoretical	Storage Elements in DC
12	Theoretical	Storage Elements in DC, Power and Energy in DC
13	Theoretical	Power and Energy in DC
14	Theoretical	Power and Energy in DC

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	3	56
Lecture - Practice	14	0	1	14
Assignment	4	2	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	Application of basics about electric current effects
2	Making of basic circuit solutions

3	Making of complex circuit solutions
4	Calculation of the effects of DC on circuit elements
5	Makes power calculation in direct current.

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
P1		3	3	3	3
P4	3	3	3	3	4
P7	3	3	3	3	4