AYDIN ADNAN MENDERES UNIVERSITY
BUHARKENT VOCATIONAL SCHOOL

ELECTRICITY AND ENERGY
ALTERNATIVE ENERGY SOURCES TECHNOLOGY
COURSE INFORMATION FORM

Course Title	Basic Electrics - Electronics I								
Course Code	AEK107		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	4	Workload	101 *(Hours)*	Theory	1	Practice	2	Laboratory	0
Objectives of the Course	Semi-conductors, P- and N- type semi conductors, PN connections, diode structure and its varieties. Rectifier circuits, half-wave, full-wave, bridge-type, full-wave rectifiers. Filter circuits,; regulation circuits in different types. Bi-polar junction transistors, usage of transistors as switch element and amplifier. Operational amplifiers and relevant practices, voltage monitoring, collecting and comparison.								
Course Content	Diodes, rectifiers, filters, voltage regulators, transistors, FETs and MOSFETs.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Project Based Study								
Name of Lecturer(s)	Lec. Hakan Can SÖYLEYİCİ, Ins. Emine ERTÜRK ŞAHİN, Ins. Emre IŞIKLI								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	50
Practice	1	10

Recommended or Required Reading

1	Elektrik-Elektronik Mühendisliğin Temelleri Cilt 1 Yazar: Uğur Arifoğlu

Week	Weekly Detailed Course Contents	
1	Theoretical	1
2	Theoretical	2
3	Theoretical	3
4	Theoretical	4
5	Theoretical	5
6	Theoretical	6
7	Theoretical	7
8	Intermediate Exam	Mid-term exam
9	Theoretical	9
10	Theoretical	10
11	Theoretical	11
12	Theoretical	12
13	Theoretical	13
14	Theoretical	14
15	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	0	1	13
Lecture - Practice	13	1	2	39
Assignment	9	0	2	18
Individual Work	9	1	1	18
Midterm Examination	1	5	1	6

Final Examination	1	5	2	7
			Total Workload (Hours)	101
			[Total Workload (Hours) / 25*] = **ECTS**	4
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Describes applications of electronic in industry.
2	Recognizes electronic circuit elements and devices and their position in the electronic cicuits.
3	Uses basic electronic circuit analysis.
4	
5	

Programme Outcomes *(Alternative Energy Sources Technology)*	
1	To have knowledge about basic science and technology.
2	To have knowledge about basic energy and alternative energy sources.
3	To have knowledge about basic electrical and electronic laws.
4	To have knowledge about the installation and operation of energy facilities.
5	Learning the methods of recycling of waste and use of energy.
6	To have experience in energy generation and project design.

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	5	5	5	5	5
P3	4	4	4	4	4
P4	3	3			3
P6					3