



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

Course Title	Asynchronous and Synchronous Machines								
Course Code	ELE203			Course 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 finding the ends of all kinds of asynchronous and synchronous electric machines, connecting them to the circuit and operating processes.								
Course Content	Installation, operation and investigation of AC motors, generators and synchronous motors								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Individual Study, Problem Solving								
Name of Lecturer(s)	Cemal GÖVEN, Ins. Serkan ARTAN								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	ASYNCHRONOUS MACHINES(Doç.Dr.İlhami Çolak)
2	Electric machines(M.Alacacı)

Week	Weekly Detailed Course Contents	
1	Theoretical	Installation and Operation of AC Motors
2	Theoretical	Installation and Operation of AC Motors
3	Theoretical	Installation and Operation of AC Motors
4	Theoretical	Installation and Operation of AC Motors
5	Theoretical	Installation and Operation of Generators -1
6	Theoretical	Installation and Operation of Generators
7	Theoretical	Installation and Operation of Generators
8	Theoretical	Installation and Operation of Generators -2
9	Theoretical	Installation and Operation of Generators
10	Theoretical	Installation and Operation of Generators
11	Theoretical	Installation and Operation of Generators
12	Theoretical	Installation and Operation of Synchronous Motors
13	Theoretical	Installation and Operation of Synchronous Motors
14	Theoretical	Installation and Operation of Synchronous Motors

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	3	56
Lecture - Practice	14	0	1	14
Studio Work	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	Operation of monophas asynchronous motors
2	Operation of triphase asynchronous motors



3	Operation of synchronous generators (alternators)
4	Operation of synchronous motors
5	Defines the failure of asynchronous and synchronous machines.

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
P11	5	4	4	3	3
P12	5	4	4	4	4
P13	5	4	4	4	4
P15	4	4	4	5	4

