



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Energy Producing From Living Things (bioenergy)							
Course Code		ÇS011		Couse Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	73 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Providing information on solid (compost, fertilizer, etc.), liquid (biodiesel, bioethanol, etc.), gaseous (biogas, syngaz, leangaz, poor gas, etc.) fuel and electricity production facilities (biogas plant, incineration, pyrolysis, gasification plant, etc.) from biomass products and biological agricultural products such as domestic, animal, forester and agricultural wastes.							
Course Content		What are the definitions and types of bioenergy. Bioenergy products and processes.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Individual Study					
Name of Lecturer(s)		Ins. Adem KESKİN, Lec. Sevil ÖZCAN							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Mustafa ACAROĞLU, Alternative energy resources. Nobel Publishing
2	Nedim SARAÇOĞLU, Global Climate Change, Bioenergy and Energy Forestry. Elif Publishing
3	http://www.emo.org.tr/ekler/bee909821a8c133_ek.pdf

Week	Weekly Detailed Course Contents	
1	Theoretical	What is Bioenergy? What are Bioenergy Types?
2	Theoretical	What is biogas, what products, how to obtain?
3	Theoretical	Use of vegetable, animal and municipal wastes in obtaining biogas.
4	Theoretical	Energy recovery from wastes and treatment plants.
5	Theoretical	Fermentation technologies and their simple applications.
6	Theoretical	What is biomass energy, what products, how to obtain?
7	Theoretical	Use of agricultural and industrial wastes as biomass.
8	Intermediate Exam	Midterm
9	Theoretical	Use of domestic and forest waste as biomass.
10	Theoretical	Thermal technologies.
11	Theoretical	Compost technologies.
12	Theoretical	Pellet-briquette technologies.
13	Theoretical	Biodiesel and bioethanol production.
14	Theoretical	Laboratory application
15	Theoretical	Laboratory application
16	Final Exam	final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Individual Work	3	5	1	18
Midterm Examination	1	10	1	11
Final Examination	1	15	1	16
Total Workload (Hours)				73
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	Know bioenergy products.
2	Know the types of Bio Energy.
3	Knows the processes of obtaining bioenergy.
4	Know the use of plant wastes in obtaining energy.
5	Knows the processes of electricity production from biological products in solid, liquid and gaseous form.

Programme Outcomes (Anesthesia)

1	To be able to recall basic knowledge about human anatomy
2	To be able to recall the knowledge about Ataturk's principles and the history of Turkish Revolution
3	To be able to recall the knowledge about ethical and moral values
4	To be able to recall the knowledge of Turkish grammar and be able to use it
5	To be able to communicate effectively with patient, their family, and own team
6	To be able to control, use, and maintain the anesthesia machines
7	To be able to recall the information about anesthesia application in the system diseases
8	To be able to recall the issues that needed to be considered in follow-up of patients in intensive care.
9	To be able to make the patients' care in intensive care
10	To be able to apply the cardiopulmonary resuscitation.
11	To be able to apply the drug, liquid and blood to the patient.
12	To be able to apply nasogastric tube to the patient and to aspirate.
13	To be able to assist the implementation of general anesthesia to patient.
14	To be able to recall the drugs used in general and regional anesthesia and learn to use them safely.
15	PO15. Can help during the maintenance, ending and post anaesthesia process.
16	Can help the practices of anesthesia and sedation outside the operation room.
17	Can communicate at the basic level of a foreign language and use this language in his job.
18	Be able to communicate at a basic level in a foreign language and be able to use this language in professional fields
19	To have the appropriate knowledge of basic sciences at the level of interest, to use specific medical terms and terminology of field

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	3
P2	3	3	3	3	3
P3	4	4	4	4	4
P4	4	4	4	4	4
P5	1	1	1	1	1
P6	1	1	1	1	1
P7	1	1	1	1	1
P8	1	1	1	1	1
P9	1	1	1	1	1
P10	1	1	1	1	1
P11	1	1	1	1	1
P12	1	1	1	1	1
P13	1	1	1	1	1
P14	1	1	1	1	1
P15	1	1	1	1	1
P16	1	1	1	1	1
P17	1	1	1	1	1
P18	4	4	4	4	4

