



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 (*Medical Documentation and Secretarial Practices*)

1	Write and pronounce medical terms correctly.
2	Collect data of medical statistics and report the results periodically after analyzing them scientifically.
3	Learn basic structure of human body and important system diseases.
4	Know principles and rules of medical secretaryship. Protect patients' rights and privacy.
5	Use Turkish and body language in a correct and effective way.
6	Run internal and external correspondence of the foundation, keep the files of the documents after classification, organize them and archive in line with filing techniques.
7	Establish verbal and written communication inside the foundation and out of foundation.
8	Make the coding procedure of diseases and health problems according to existing international classification systems.
9	Run the counseling services for patients and their relatives.
10	Solve the problems that are encountered in work life quickly and effectively.
11	Use the necessary equipment for professional practices such as computer and office devices effectively.
12	Improve professional knowledge and skills continuously.
13	Executes any patient registration-documentation processes
14	Makes archiving operations
15	Prepares medical documents
16	Knows Turkish history and Atatürk's revolutions.
17	Adapt to team work in application areas.
18	Knows and defines diseases.
19	Have general information about the world and biological formations.
20	English speaking writer

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	1	1	1	1	1
P2	3	3	3	3	3
P3	2	2	2	2	2
P4	1	1	1	1	1
P5	5	5	5	5	4
P6	3	3	3	2	2
P7	4	4	4	3	3
P8	1	1	1	1	1
P9	1	1	1	1	1
P10	5	5	5	5	5
P11	5	5	5	5	
P12	5	5	5	5	5
P13	1	1	1	1	1
P14	3	3	3	5	5
P15	1	1	1	1	1
P19	5	5	5	5	5

