

BIOMASS ENERGY TECHNOLOGIES

1	Course Title:	BIOMASS ENERGY TECHNOLOGIES	
2	Course Code:	CEV6303	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. Nezih Kamil Salihoğlu	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	nkamils@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	1. Introducing the Biomass Energy Technologies 2. Environmental Impact Assessment of Biomass Energy Technologies 3. Technology selection, capacity planning and cost estimation for the Biomass Energy Technology. 4. Comparison of Biomass Energy Technology Applications in Turkey and in the World.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Learn the Biomass Energy Technologies
		2	Understand the Environmental Impact Assessment of Biomass Energy Technologies
		3	Compare the Biomass Energy Technology Applications
		4	Estimate the investment and operation cost for full scale BET project.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Description of Biomass Energy Technologies		
2	Environmental Impact Assessment of Biomass Energy Technologies		

3	Energy crops and plants , Specifications of Biofuels			
4	Biofuel Production Technologies			
5	Energy Conversion Technologies for Biomass (Anaerobic Fermentation Technologies)			
6	Energy Conversion Technologies for Biomass (Incineration)			
7	Energy Conversion Technologies for Biomass (Co-Incineration)			
8	Energy Conversion Technologies for Biomass (Prolysis)			
9	Energy Conversion Technologies for Biomass (Gasification)			
10	Comparison and selection of Energy Conversion Technologies for Biomass			
11	Capacity planning for the Biomass Energy Technologies			
12	Cost estimation of the Biomass Energy Technologies			
13	Comparison of Biomass Energy Technology Applications in Turkey and in the World			
14	Project presentation			
22	Textbooks, References and/or Other Materials:	1.United Nations Development Program/World Bank. Energy sector management assistance program. 2. Biomass Processing Technologies. Vladimir Strezov.		
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		Roberto, Sustainable Development and Environmental Management 2000		
Practicals/Labs				
Self study and preperation		Bioreactor Technology, Editors: Paek, Kee-Yoeup, Murthy, Ugochukwu Nwagwu, Zheng Jiao Jiao (Eds.) ISBN 070		
Homeworks				
Projects		5. Progress in Biomass and Bioenergy Production, Edited by Syed Shahid Shaukat ISBN 070 052 267 401 7 456		
Field Studies				
Midterm exams				
Others				
TERM LEARNING ACTIVITIES		NUMBER	WEIGHT	
Final Exams				
Total Work Load				
Total work load/ 30 hr		0	0.00	
Quiz				
ECTS Credit of the Course				6.00
Final Exam			50.00	
Total		2	100.00	
Contribution of Term (Year) Learning Activities to Success Grade			50.00	
Contribution of Final Exam to Success Grade			50.00	
Total			100.00	
Measurement and Evaluation Techniques Used in the Course				
24	ECTS / WORK LOAD TABLE			

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			