

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 SALİHOĞLU	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Prof. Dr. N. Kamil SALİHOĞLU E-posta: nkamils@uludag.edu.tr Telefon: 0-224-2942118 Adres: Bursa Uludağ Üniversitesi, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 16059,Görükle /BURSA	
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:	Competence in biomass energy technologies and expertise in selecting related technologies	
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			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	14.00	14.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		20	20.00	20.00
Homeworks		0	0.00	0.00
Projects		4	40.00	40.00
Field Studies		1	10.00	10.00
Midterm exams		0	0.00	0.00
Others		0	0.00	0.00
Final Exams		1	20.00	20.00
Total Work Load				182.00
Total work load/ 30 hr				6.07
TERM LEARNING ACTIVITIES		NUMBE	WEIGHT	
ECTS Credit of the Course				6.00
Midterm Exam	0	0.00		
Quiz	0	0.00		
Home work-project	1	40.00		
Final Exam	1	60.00		
Total	2	100.00		
Contribution of Term (Year) Learning Activities to Success Grade		40.00		
Contribution of Final Exam to Success Grade		60.00		
Total		100.00		
Measurement and Evaluation Techniques Used in the Course		Student-centered assessment and evaluation methods and techniques are used in this 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	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	5	4	5	0	0	0	5	0	0	0	0	0	0	0	0	0
ÖK3	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	4	0	0	0	4	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			