

RENEWABLE ENERGY AND ENVIRONMENT

1	Course Title:	RENEWABLE ENERGY AND ENVIRONMENT	
2	Course Code:	MAK4033	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ÖMER KAYNAKLI	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Tel: 0224 294 1973 e-mail: ilhami@uludag.edu.tr U. Ü. Müh.-Mim. Fak. Makina Böl. BURSA	
17	Website:		
18	Objective of the Course:	The definition and classifications of energy, the position of renewable energy in this classification, the types of renewable energy and explaining each type in detail.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To be able to gain to conduct individual and team work.
		2	To provide a contribution for verbal and/or written communication skills.
		3	To gain professional responsibility and ethical consciousness.
		4	
		5	
		6	
		7	
		8	
		9	
		10	
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	

1	1. Lesson: The explanation of course and course content, the definition of energy. 2. Lesson: The definition and classifications of energy, giving one type of renewable energy source as a presentation topic to each student			
2	1. Lesson: The definition and classifications of renewable energy 2. Lesson: Solar Energy			
3	1. Lesson: Solar Energy 2. Lesson: Solar Photovoltaic			
4	1. Lesson: Hydroelectric energy 2. Lesson: Hydroelectric energy			
5	1. Lesson: Biomass 2. Lesson: Biomass			
6	1. Lesson: Tidal Energy 2. Lesson: Tidal Energy			
7	1. Lesson: Wind energy 2. Lesson: Wind energy			
8	1. Lesson: Wave Energy 2. Lesson: Wave Energy			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	2.00	28.00
10. Repeating courses and midterm exam				
Practicals/Labs		0	0.00	0.00
11. 1. Lesson: Nuclear Energy 2. Lesson: Nuclear Energy		14	2.00	28.00
Homeworks		1	20.00	20.00
12. 1. Lesson: Hydrogen 2. Lesson: Hydrogen		0	0.00	0.00
Field Studies		0	0.00	0.00
13. 1. Lesson: Integration 2. Lesson: Integration		1	6.00	6.00
Others		0	0.00	0.00
14. Final Exams		1	6.00	6.00
Total Work Load				88.00
Total work load/ 30 hr				2.93
ECTS Credit of the Course				3.00

22	Textbooks, References and/or Other Materials:	1. Boyle, G., Renewable Energy, Power for Sustainable Future, The Open University, U. K., 1996. 2. "Alternatif Enerji Kaynakları ve Bursa İlindeki Potansiyeli", Tez Çalışması, Nurgül KOÇ, 2001 BURSA 3. Enerji Bakanlığı Web Sitesi. (www.enerji.gov.tr) 4. http://bioenergy.ornl.gov/ 5. www.mmo.org.tr/izmir/bulten 6. www.youthforhab.org.tr/index-tr.html 7. www.kojenerasyon.com/haber/2001/11/06/ecogenh Haber.htm 8. www.aresenerji.com/company_profile.html 9. www.ntvmsnbc.com/news/171315.asp 10. www.gazi.edu.tr/duyuru/yanmasem.doc 11. www.geocities.com/aerbas/tez.htm 12. www.taek.gov.tr/nukener/gorus/gorusbottom.html 12. www.angelfire.com/scifi/nuclear220/sec555.htm 13. www.dsi.gov.tr/ 14. www.newmillshydro.freemove.co.uk/sitemap.html 15. www.maximumbilgi.com/bilim/hidroelektrik.htm 16. www.tusiad.org/turkish/rapor/enerji/html/sec10.html
-----------	---	--

23	Assesment
-----------	-----------

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	30.00
Quiz	0	0.00
Home work-project	1	20.00
Final Exam	1	50.00
Total	3	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	5	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	5	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							