

COURSE DESCRIPTION FORM	
Course Code and Title	KM364 Energy Technology
Course Semester	6
Catalog Description (Content) of the Course	Energy and resources. The scope, cost and efficiency of energy conversions. Chemical energy, combustion, reversible reactions, batteries and fuel cells. Thermal energy. Nuclear energy. Solar energy. Geothermal energy.
Main Textbook	• Acaroğlu, M., “Alternatif Enerji Kaynakları”, Nobel yayınevi, 2007.
Supporting Textbooks	• Tester, J. W., et. al. “Sustainable Energy”, MIT press, 2005. • Hanjalic, K., van de Krol, R., Lekic, A., “Sustainable Energy Technologies”, Springer, 2008. • Çengel, A. Y., Boles, M. A., ‘Thermodynamics: An Engineering Approach’ 3.baski.Mc Graw Hill,1999. • Süreli Yayınlar.
Course Credit (ECTS)	3
Prerequisites of the Course (Compulsory attendance should be indicated here.)	-
Type of the Course	Elective
Instruction Language of the Course	Turkish
Object and Target of the Course	To have knowledge about energy technologies and to use engineering, science and mathematics knowledge in this subject.
Learning Outcomes of the Course	1- To recognize the various energy technologies being used and under investigation. 2- To learn the basic principles of energy technologies, 3- To be able to evaluate the advantages and disadvantages of energy technologies.
Mode of Delivery	Face to face
Weekly Schedule of the Course	1. Week Introduction, Energy and Resources. 2. Week Energy Conversion Goals, Efficiency and Price Problems 3. Week Combustion and Thermal Energy 4. Week Kimyasal Enerji (Tersinir Tepkimeler, Piller ve Yakıt Hücreleri) 5. Week Nuclear Energy 6. Week Nuclear Energy 7. Week Solar Energy 8. Week Biomass Energy 9. Week Geothermal Energy 10. Week Geothermal Energy 11. Week Term Paper Presentation 12. Week Term Paper Presentation 13. Technical Trip 14. Technical Trip
Educative Activities (Credit will be determined based on the time given for these activities. Should be filled carefully.)	Theoretical Study Hours of Course Per Week Reading Searching in Internet and Library Preparing Reports Preparing Presentation Presentation Mid-Term and Studying for Mid-Term

	Final and Studying for Final						
Assessment Criteria		Sayısı	Toplam Katkısı (%)				
	Midterm	2	30				
	Homework	3	10				
	Assignment	0	0				
	Projects	1	20				
	Practice	0	0				
	Quiz	0	0				
	Contribution of In-term Studies to Overall Grade		60				
	Contribution of Final Examination to Overall Grade		40				
	Attendance		70				
Workload of the Course	Activity	Total Week Count	Weekly Duration (in hour)	Total Workload in Semester			
	Theoretical Study Hours of Course Per Week	14	3	42			
	Practicing Hours of Course Per Week						
	Reading	4	1	4			
	Searching in Internet and Library	4	1	4			
	Designing and Applying Materials						
	Preparing Reports	2	2	4			
	Preparing Presentation	1	3	3			
	Presentation	1	1	1			
	Mid-Term and Studying for Mid-Term	2	3	6			
	Final and Studying for Final	1	3	3			
	Other						
	Total work load			67			
	Total work load/25			2.68			
	ECTS of the course			3			
Course's Contribution To Program	No	Program Outcomes	1	2	3	4	5
	1	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied information in these areas to model and solve engineering problems.			x		
	2	Ability to identify, formulate, and solve complex engineering problems; ability to select and			x		

