	HEAT ECONOMY								
1	Course Title:	HEAT ECONOMY							
2	Course Code:	MAK4040							
3	Type of Course:	Optional							
4	Level of Course:	First Cycle							
5	Year of Study:	4							
6	Semester:	8							
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. Abdulvahap Yiğit							
15	Course Lecturers:								
16	Contact information of the Course Coordinator:	avahap@uludag.edu.tr / 2242941971 / U.Ü. Müh. Mim. Fak. Mak. Müh. Bölümü BURSA							
17	Website:								
18	Objective of the Course:	To train students in selecting of isolation materials. To train the students in understanding building and HVAC heat isolation practices. To provide knowledge on heat exchangers and heat pipes. To train students on projecting of heat isolation of buildings. To provide information on heat recovery systems.							
19	Contribution of the Course to Professional Development:								
20	Learning Outcomes:								

		1	Select appropriate isolation materials.							
			Use appropriate isolation materials for buildings and HVAC Systems.							
			Determine of ideal insulation thickness							
			Select appropriate isolation materials.							
			Use appropriate isolation materials for buildings and HVAC Systems.							
			Determine of ideal insulation thickness							
			Select appropriate isolation materials							
			Use appropriate isolation materials for buildings and LN/AC							
			Systems.							
			Determine of ideal insulation thickness							
		2	l lse appropriate isolatio	on materials for build	tings and HVAC					
			Systems.							
Activit	es	2	Number	Duration (hour)	Total Work					
					Load (hour)					
Theore	tical		Determine of ideal insul	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	28.00					
Practica	als/Labs		0	0.00	0.00					
Self stu	idy and preperation	4	Determine and solve th	2.00	28.00					
Homew	vorks	14	1	10.00	10.00					
Project	8	_	0	0.00	0.00					
Field S	tudies		0	0.00	0.00					
Midtern	n exams	0	Opunnization rechnique	2.00	2.00					
Others		7	10	2.00	20.00					
Final F	xams	0	1	2.00	2.00					
Total W	/ork Load				90.00					
Total w	ork load/ 30 hr	10			3.00					
ECTS Credit of the Course					3.00					
		Co	urse Content:							
Week	Theoretical		Practice							
1	Heat Transfer									
2	Insulation materials									
3	Heat insulation in buildings									
4 Calculation of ideal insulation thickness										
5	Appliying insulation to building									
6	Appliyng insulation to HVAC									
7	Effective energy productions									

8	Repeating courses and midterm exam																	
9	Midterm exam.																	
10	Heat exchangers																	
11	Heat recovery systems																	
12	Standarts of insulation																	
13	Optir	Optimization Techniques																
14	Pres	enta	tion P	ower l	Point													
22	Textbooks, References and/or Other Materials:								1.E Ka 2.E 19 3. 4. ista 5. 19	 Binalarda ve Tesisatta Isı Yalıtımı, Prof. Dr. T.H. Karakoç, E. Binyıldız Enerji Ekonomisi, T. H. Karakoç, Demirdöküm yayınları, 1997 İzocam, Isı + Ses + Teknik İzalasyon Sanayide Enerji Tasarrufu, A.K. Dağsöz, Alfa, İstanbul,1993. Dağsöz, A.K., Yapılarda ısı yalıtımı ve buhar geçişi, 1991 								
23	Asse	esme	ent															
TERM L	LEARN	NING		VITIES	;		1		EWE	WEIGHT								
Midtern	n Exa	m					-	1	40	40.00								
Quiz							()	0.0	0.00								
Home	work-	proje	ect				·	1	10	10.00								
Final E	xam						•	1	50	50.00								
Total	otal 3							10	100.00									
Contrib Succes	oution ss Gra	of T ade	erm (`	rear) l	Learn	ing Act	ivities	s to	50	50.00								
Contrib	Contribution of Final Exam to Success Grade							50	50.00									
Total	Total							10	100.00									
Measurement and Evaluation Techniques Used in the Course							ie											
24	ECT	rs /	WO	RK L	OAD	TAB	LE											
25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																		
	F	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16	
ÖK1	C)	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
ÖK2	C)	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	
ÖK3	4	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
ÖK4	C)	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
ÖK5	C)	0	4	0	0	0	0	0	0	0	0	0	0	3	0	0	
ÖK6	C)	0	4	0	0	0	0	0	0	0	0	0	0	3	0	0	
	LO: Learning Objectives PQ: Program Qualifications																	

Contrib	1 very low	2 low	3 Medium	4 High	5 Very High
ution					
Level:					