AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Heat Pump and Geothermal Energy								
Course Code	AEK217		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	3	Workload	72 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Students are expected to gain knowledge and skills on heat pumps, their utility in heating and cooling, their assembly and basic energy calculations.								
Course Content	Description of heat pumps, application domains, energy efficiency, and performance coefficient, heating pumps.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study, Problem Solving								
Name of Lecturer(s)	Ins. Emre IŞIKLI								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Alternatif Enerji Kaynakları Yazar: Mustafa Acaroğlu

Week	Weekly Detailed Course Contents	
1	Theoretical	Isı pompalarının tanınması
2	Theoretical	Isı pompası bileşenleri
3	Theoretical	Isı pompası türleri
4	Theoretical	Isı pompası türleri
5	Theoretical	Enerji kaynağına bağlı ısı pompası seçimi
6	Theoretical	Isıtma amaçlı ısı pompası dizaynı
7	Theoretical	Soğutma amaçlı ısı pompası dizaynı
8	Theoretical	Tersinir ısı pompaları
9	Intermediate Exam	Mid-term exam
10	Theoretical	Isı pompası temel bileşenleri
11	Theoretical	Isı pompası montajı
12	Theoretical	Isı pompalarının verimlilik hesaplamaları
13	Theoretical	Performans katsayısına bağlı pompa seçimi
14	Theoretical	Isı pompası termodinamiği
15	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	0	3	39
Project	7	2	1	21
Midterm Examination	1	5	1	6
Final Examination	1	5	1	6
			Total Workload (Hours)	72
			[Total Workload (Hours) / 25*] = **ECTS**	3
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	
2	
3	

4	
5	

Programme Outcomes *(Alternative Energy Sources Technology)*	
1	To have knowledge about basic science and technology.
2	To have knowledge about basic energy and alternative energy sources.
3	To have knowledge about basic electrical and electronic laws.
4	To have knowledge about the installation and operation of energy facilities.
5	Learning the methods of recycling of waste and use of energy.
6	To have experience in energy generation and project design.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P2	3	3	3	3	3
P3	5	5	5	5	5
P4	3	3	3	3	3
P6	3	3	3	3	3