T.C. ESKİŞEHİR OSMANGAZİ UNIVERSITY
ENGINEERING AND ARCHITECTURE FACULTY
MECHANICAL ENGINEERING DEPARTMENT

COURSE INFORMATION FORM

SEMESTER	Fall

COURSE CODE	151817467/151837467	COURSE NAME	Heat Economy

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
7	3	0	0	3	5	COMPULSORY ( ) ELECTIVE (x)	Turkish

COURSE CATAGORY			
Basic Science	Basic Engineering	Engineering Subjects [if it contains considerable design, mark with (√)]	Social Science
	x	( )	

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	40
	Quiz		
	Homework		
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	60

PREREQUIEITE(S)	
COURSE DESCRIPTION	Turkey's Overall Energy Situation, Energy Saving And Survey Methods, Energy And Mass Equations, Combustion Systems, Residential Heat Insulation, Insulation Material Selection, Piping Insulation, Residential Energy Economy, Industry Energy Economics, Economic Analysis Of Energy Investments
COURSE OBJECTIVES	To have a theoretical knowledge of the overall energy situation, understand the importance of residential and industrial insulation, learn insulation materials, be able to analyze on energy investments.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Engineer candidates to work in the industry, heat, and heat economy, having the basic notation
COURSE OUTCOMES	Able to analyze the overall energy situation, insulation materials, thermal insulation application by selecting the most suitable one can choose their thickness, to have the necessary knowledge about methods used in the evaluation of investments
TEXTBOOK	Dağsöz A.K., "Sanayide Enerji Tasarrufu" İzocam Publish, 1991. "Sanayide Enerji Yönetimi" EİEİ Publication, 1997. TS825
OTHER REFERENCES	Enerji Analizi ve Yönetimi, A.Ü. Publication, Publication number:2115 Enerji analizi A.Ü. Publication, Publication number:2486
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Turkey's Overall Energy Situation
2	Energy-Saving Methods
3	Energy And Mass Equations
4	Combustion Systems
5	Heat Insulation
6	Insulation Applications
7	Determination of the Economic Insulation Thickness
8	Mid-Term Examination
9	Mid-Term Examination
10	Insulation Plumbing Applications
11	Economic Analysis Methods
12	Economic Analysis Methods
13	Waste Heat Recovery
14	Technical Tour
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	Sufficient knowledge of engineering subjects related with mathematics, science and own branch; an ability to apply theoretical and practical knowledge on solving and modeling of engineering problems.	[x]	[ ]	[ ]
2	Ability to determine, define, formulate and solve complex engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	[ ]	[x]	[ ]
3	Ability to design a complex system, a component and/or an engineering process under real life constrains or conditions, defined by environmental, economical and political problems; for that purpose an ability to apply modern design methods.	[ ]	[ ]	[x]
4	Ability to develop, select and use modern methods and tools required for engineering applications; ability to effective use of information technologies.	[ ]	[x]	[ ]
5	In order to investigate engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	[ ]	[ ]	[x]
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	[x]	[ ]	[ ]
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	[ ]	[x]	[ ]
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	[x]	[x]	[ ]
9	Understanding of professional and ethical issues and taking responsibility	[ ]	[x]	[ ]
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	[ ]	[x]	[ ]
11	Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering solutions.	[ ]	[x]	[ ]
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Prepared by: Prof. Dr. Haydar ARAS **Date: 13/11/2017**

Signature(s):