



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

COURSE INFORMATION FORM

SEMESTER	Spring
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COURSE CODE	151818424 151838424	COURSE NAME	Air Conditioning System
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
8	3	-	-	3	5	COMPULSORY () ELECTIVE (X)	Turkish
COURSE CATAGORY							
Basic Science		Basic Engineering		Mekhanical Engineering [if it contains considerable design, mark with (√)]			Social Science
				(X)			
ASSESSMENT CRITERIA							
MID-TERM			Evaluation Type		Quantity		%
			1 st Mid-Term		1		30
			Quiz				
			Homework				
			Project		1		30
			Report				
			Others (.....)				
FINAL EXAM					1		40
PREREQUIEITE(S)							
COURSE DESCRIPTION			Introduction to air conditioning, general definitions, basic principles, mass transfer, psychrometric and applications, cooling load account, air duct design and design..				
COURSE OBJECTIVES			The aim of the course is to provide the student with the ability to design various air conditioning and ventilation systems.				
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION			To gain the skill of solving the problems and learning the systems they will encounter in practice by using the topics given in various lessons during the course of mechanical engineering education.				
COURSE OUTCOMES			1 . Mass transfer and formulation 2. Use of psychrometric diagram and demonstration of operations performed in the diagram 3. Calculation of heat gain and cooling load 4. Preparing the channel account and air conditioning project				
TEXTBOOK			HVAC Engineer's Handbook 11. ed.F. Porge LL.B, BSc(Eng), CEng, FIMechE, MIEE, FCIBSE Havalandırma tesisatı, MMO/650				
OTHER REFERENCES			Klima Isısan çalışmaları No:305, ekim 2001 Handbook of Heating, Ventilation, and Air Conditioning, Ed. Jan F.Kreider Boca Raton, CRC Press LLC. 2001				
TOOLS AND EQUIPMENTS REQUIRED							

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction to air conditioning
2	Introduction to air conditioning
3	Basic principles of air conditioning
4	Basic principles of air conditioning
5	Mass Transfer
6	Mass Transfer
7	Mass Transfer
8	Mid-Term Examination 1
9	
10	Finding the characteristics of humid air via psychrometric diagram
11	Processes performed in pschometric diagram
12	Calculation of cooling load
13	Design and project of air ducts
14	Design and project of air ducts
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	Sufficient knowledge of engineering subjects related with mathematics, science and mechanical engineering; an ability to apply theoretical and practical knowledge on solving and modeling of mechanical engineering problems.	X		
2	Ability to determine, define, formulate and solve complex mechanical 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 mechanical engineering applications; ability to effective use of information technologies.	X		
5	In order to investigate mechanical 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		
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: Ass. Prof. Özge Altun

Date: 13.11.2017

Signature(s):