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

COURSE INFORMATION FORM

SEMESTER	Spring

COURSE CODE	151818660	COURSE NAME	Compressor Theory and Applications

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
8	3	0		3	5	COMPULSORY ( ) ELECTIVE (x)	

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

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term		
	Quiz		
	Homework	X	50
	Project		
	Report		
	Others (……)		
FINAL EXAM		X	50

PREREQUISITE(S)	
COURSE DESCRIPTION	Compressor theory and research of application areas.
COURSE OBJECTIVES	Applications of compressors in machinery production industry, design and gainning an experiences for solutions of problems.
COURSE ADDITION TO APPLY PROFESSIONAL EDUATION	To prepare the students with trainning for industrial applications.
COURSE OUTCOMES	Taking a background on determination of toubleshootings, working and designing systems which are placed at any part of the industry.
TEXTBOOK	1. Compressors: Selection and Sizing, 3rd edition, by Royce N. Brown, ISBN: 0750675454 Pub. Date: June 2005, Publisher: Elsevier Science & Technology Books. 2. Compressors:Selection %Sizing/Royce N.Brown-2nd edition, ISBN:0-88415-164-6, Library of Congress Cataloging-in Publication Data. 3. Compressors and Applications, Prof.Dr.Yaşar Pancar ve Assist.Prof.Dr.H.Sevil Ergür, Eskişehir, pp. 325, In Press.
OTHER REFERENCES	1.Vacuum and Presssure Systems Handbook, Gast Manufacturing Inc, A Unit of IDEX Corporation. 2. Vacuum Technology and Elements, Prof.Dr.Yaşar Pancar ve Assist.Prof.Dr. H.Sevil Ergür, Eskişehir, pp. 74. In press.
TOOLS AND EQUIPMENTS REQUIRED	If required, providing an equipment in the laboratory.

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Compressor Theory
2	Compressor Theory and Applications
3	Compressor Types, Cooling and Energy Economics
4	Vacuum Theory
5	Description of Vacuum Technology
6	Calculations and Control of Compressed Air
7	Calculations and Control of compressed Air
8	*Mid-Term Examination*
9	*Mid-Term Examination*
10	Calculations and Control of Vacuum Technology
11	Calculations and Control of Vacuum Technology
12	Compressed Air Problems and Solutions
13	Troubleshooting in Compressor Systems and Air Lines
14	Discussion of Compressed Air And Vacuum Pumps
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**		
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: Assist. Prof. Dr. H. Sevil ERGÜR **Date:**

Signature(s):