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

COURSE INFORMATION FORM

SEMESTER	SPRING

COURSE CODE	151818461	COURSE NAME	PNEUMATIC CIRCUITS

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

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

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	50
	Quiz		
	Homework		
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	50

PREREQUIEITE(S)	
COURSE DESCRIPTION	Compressed air systems, circuits and element and example of calculation of systems.
COURSE OBJECTIVES	Prepare the student to industry in usage of compressed air nad machinery.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Prepare the student to industry by teaching then design, application and troublshooting.
COURSE OUTCOMES	Student will be ready for industry from the application point of view of compressed air.
TEXTBOOK	Pnömatik teori ve uygulamaları, Prof.Dr.Yaşar Pancar, 1998, A.Ü yayını Pnömatik, Çeviren:Doç.Dr.Yaşar Pancar, MEB yayını
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Princibles of Pneumatics
2	Pneumatic, mechanisation and safety systems.
3	Cost analysis in Pneumatic systems.
4	Compressors, lubrication, control systems,assembly systems, selection of compressors.
5	Air tanks, heat exchangers ve coolers.
6	Compressed air lines, pressure loss, preparation of compressed air.
7	Valves, cylindersfler,actuators, motors
8	Mid-Term Examination
9	Mid-Term Examination
10	Pneuamtic circuits, air-oikl circuits
11	Pneumatic accesseroies, pulverisation systems.
12	Speed contro, air bleed and time relay
13	Automatic circuits and sequnce control
14	Air units and air jet applications.
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	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			
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: **Date:**

Signature(s):