

MM 540 Air Pollution and Control Technologies				MECHANICAL ENGINEERING DEPARTMENT					
Semester	Methods of Education							Credits	
	Lecture	Recit.	Lab.	Project/Field Study	Homework	Other	Total	Credit	ECTS credit
1,2	30	12				146	188	3	7.5
Language	Turkish								
Compulsory / Elective	Optional								
Prerequisites	-								
Course Contents	Formation of air pollution and related definitions. Fuels, emissions and emission formation mechanisms. Environmental aspects of air pollution. Legal aspects of air pollution. Air pollution control acts and their applications. Technical aspects of air pollution. Air pollution control technologies. Internal and external emission control methods .Environmental chimney design. Measurement and analyses aspect of air pollution. Emission and imission measurements. Flue gas purification and applications. Flue gas dust, SO2, NOx								
Course Objectives	To describe the basic approaches used for analyses, design and optimization of air pollution control systems. To explain the engineering approaches to system design and operation. To teach and apply the economical and environmental analyses to the air pollution control systems.								
Learning Outcomes and Competences	Understanding of the basic characteristics of air pollution control systems. Learning and applications of approaches and methods used to to analyses and design of air pollution control systems. Interpret the results of solutions.								
Textbook and /or Reference	1 Stern,A.C. Engineering Control of Air Pollution. Academic Pres.1977. 2 Durrmaz, A, Y. Ercan. Yanmadan Kaynaklanan Hava Kirliliğinin Kontrolu.1987. 3 Durmaz , A. Kömürün Yanması. Kömür, Özellikleri,Teknolojisi ve Çevre İlişkileri,İTÜ,1998.								
Assessment Criteria					If any, mark as (X)		Percentage (%)		
	Midterm Exams				X		40		
	Quizzes								
	Homeworks								
	Projects								
	Term Paper								
	Laboratory Work								
	Other								
	Final Exam				X		60		
Instructors	Assist. Prof. Huseyin TOPAL								
Week	Subject								
1	Formation of Air Pollution, It's Environmental Effects.								
2	New Developments Related to Combustion and Emission Control.								
3	Air Pollution Control Mechanisms and Systems.								
4	Legal Aspects of Emission – Imission Control.								
5	Technical Aspects of Emission – Imission Control.								
6	Internal and External Emission Control Techniques.								
7	Midterm I. Environmental Chimney Design.								
8	Emission Measurements and Their Application.								
9	Imission (air pollution) Measurements.								
10	Emission Distribution Modeling, Air Pollution Contribution Value.								
11	Particulate Emission Control Systems.								
12	SO2 Emission Control Systems.								
13	Midterm II. NOX Emissions Control Systems.								
14	CO2 Control Systems, Control of Vehicle Emission.								