MM 485 Industrial Air Pollution Control				DEPARTMENT of MECHANICAL ENGINEERING					
Semester	**Methods of Education**							**Credits**	
	Lecture	**Recit.**	**Lab.**	**Project / Field Study**	**Homework**	**Other**	**Total**	**Credit**	**ECTS Credit**
8	42	0	10	10	13	-	75	3	3.0
Language	Turkish								
Compulsory / Elective	Elective								
Prerequisites	None								
Course Contents	Definition, formation and effects of Air Pollution, Identification of Air Pollution caused by combustion and prevention methods, Process-related air pollution and ways of prevention, Industrial emission measurement methods and measurement principles and calculation methods for each parameter of the emission, The legislation on emissions and applications.								
Course Objectives	To teach basic features of industrial air pollution and its formation mechanisms, To introduce measuring methods and measurement systems. To teach measurement and evaluation of emissions. To teach methods and systems of prevention of air pollution in sectorial basis.								
Learning Outcomes and Competences	Basic features of industrial air pollution. To understand the necessary mechanisms to prevent pollutant by understanding the formation mechanisms. To learn methods of emission measurement and measurement systems.								
Textbook and / or Reference	1. Noel de Nevers , “Air Pollution Control Engineering”, 2. Gunter Baumbach, “Air Quality Control” 3. Hüseyin TOPAL, Ders Notları								
Assessment Criteria							**If any, mark as (x)**		**Percentage (%)**
	Midterm Exams						1		30
	Quizzes						5		20
	Homeworks						1		10
	Projects								
	Term Paper								
	Laboratory Work								
	Other								
	Final Exam						1		40
Instructors	Assist.Prof. Huseyin TOPAL								
Week	**Subject**								
1	Introduction: Definitions, air pollution and its history, air pollution formation and emissions								
2	Impacts of Air Pollution and its effect on human, environment, climate change, materials and plants								
3	Air pollutant emissions and its sources: classification and characteristics of emissions								
4	Air pollutant emissions and sources: Air Pollution caused by combustion, Emission properties of gratecombustion systems, Emission characteristics of burner combustion systems.								
5	Air pollutant emissions and their sources: the emission characteristics of fluidized bed combustion systems, the importance of fluidized bed technology on emission control								
6	Air pollution emissions and sources: Emissions due to mechanical processes								
7	Air pollutant emissions and sources: emissions from chemical processes								
8	Emission Measurements: Methods of emission measurement and engineering approach								
9	Emission Measurements: Methods of measurement and standart structure of measurement devices								
10	Emission Measurements: Gas emission measurements								
11	Midterm Exam I, Solution of application oriented sample problems.								
12	Emisyon Ölçümleri: Particulate emission measurements								
13	Emisyon Ölçümleri: Special matter measurements								
14	Assesment of emission measurements and legislations								