AIR POLLUTION SCIENCE

1	Course Title:	AIR POLLUTION SCIENCE
2	Course Code:	CEV4017
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	7
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	
12	Language:	English
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. YÜCEL TAŞDEMİR
15	Course Lecturers:	Doç.Dr. S.Sıddık Cindoruk
16	Contact information of the Course Coordinator:	E-posta: tasdemir@uludag.edu.tr Tel: 0 224 294 2105 Adres:Uludağ Üniversitesi, Mühendislik-Mimarlık Fakültesi, Çevre Mühendisliği Bölümü, 16059,Görükle /BURSA
17	Website:	
18	Objective of the Course:	The main objectives of the course are to determine the air pollution sources; to explain the fate of the pollutants, relation with meteorological factors; to give information about stack design and Air Quality Protection Act.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	To have knowledge about characteristics of air pollutants, sources and formation processes
	2	To have knowledge on fate, transport and reactions of air pollutants
	3	To have skill on calculation of air pollutant concentrations due to different heights and distances originated from point, linear and area sources.
	4	To have skill on design of stacks proper for air quality
	5	To have knowledge about regulations and applications related to air pollution
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21	Course Content:

Course Content:

Week	Theoretical	Practice
1	Introduction, Air Pollution System	

2	Air Pollutants (Sources and Classification)	
3	Air Pollutants (Characteristics and Effects)	
4	Ideal Gas Law and Other Gas Laws	
5	Air Pollution Regulation	
6	Stack Design	
7	Air Pollution Meteorology- Quiz 1	
8	Air Pollution Meteorology	
9	Calculation of Plume Rise	
10	Repeating courses and midterm exam	
11	Air Pollution and Dispersion Modelling	
12	Area and Point Sources	
13	Fuels and Combustion Chemistry Quiz 2	
14	Toxic Air Pollutants–Report presentation	

22	Textbooks, References and/or Other Materials:	1.Air pollution: its origin and control, Kenneth Wark, Cecil F. Warner, Wayne T. Davis, Menlo Park, Calif., Addison-Wesley, 1998 2.Hava Kirliliği ve Kontrolünün Esasları, Aysen Müezzinoğlu, DEÜ, 2000. 3.Atmospheric chemistry and physics of air pollution, John H. Seinfeld, New York, Wiley, 1986.
23	Assesment	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Field Study	14	2.00	28.00
Homeworks	1	10.00	10.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	2	7.00	14.00
Others	0	0.00	0.00
Final Exams	1	10.00	10.00
Total Work Load			104.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

Quiz	2	5.00
Self Study and preparation	1	60.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Measurement and Evaluation Techniques Used in the		

24 ECTS / WORK LOAD TABLE

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
ÖK2	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0

LO: Learning Objectives PQ: Program Qualifications					
Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**