	STACK GAS ME	ASUF	REMENT AND ANALYSIS								
1	Course Title:	STACK	GAS MEASUREMENT AND ANALYSIS								
2	Course Code:	CEV525	1								
3	Type of Course:	Optional									
4	Level of Course:	Second	Cycle								
5	Year of Study:	1									
6	Semester:	1									
7	ECTS Credits Allocated:	6.00									
8	Theoretical (hour/week):	2.00									
9	Practice (hour/week):	0.00									
10	Laboratory (hour/week):	2									
11	Prerequisites:	-									
12	Language:	Turkish									
13	Mode of Delivery:	Face to	face								
14	Course Coordinator:	Prof. Dr. YÜCEL TAŞDEMİR									
15	Course Lecturers:	Doç. Dr. S. Sıddık CİNDORUK Yrd. Doç. Dr. Fatma ESEN									
16	Contact information of the Course Coordinator:	E-posta: tasdemir@uludag.edu.tr Tel: 0224 2942105 Adres: Uludağ Üniversitesi,Mühendislik-Mimarlık Fakültesi, Çevre Mühendisliği Bölümü, 16059 Nilüfer-Bursa									
17	Website:										
18	Objective of the Course:	To measure and report the flue gas originated from point sources									
19	Contribution of the Course to Professional Development:										
20	Learning Outcomes:										
		1	To learn the sampling techniques from stacks,								
		2	To be able to use the measurement devices,								
		3	To measure particulate matter in isokinetic conditions								
		4	To evaluate the sampling results and to prepare a report.								
		5									
		6									
		7									
		8									
		9									
		10									
21	Course Content:										
		Co	ourse Content:								
	Theoretical		Practice								
1	Introduction (Course content, grading explanations)		Orientation of the lab and devices								
2	Definitions of the stack gas and partimatter	iculate	PM analysis method								
3	Combustion theory, reactions		PM measurement								

4	Calculation of stack gas amount during combustion	g the	Visitation of a company having combustion process							
5	Flue gas characteristics for some indus	stries	Visitation of a company related to the stacks							
6	Operation principles of measurement of	devices	Gas sampler device – introduction and application							
7	Isokinetic conditions and measuremen this condition		PM and velocity measurement devices - introduction and application							
8	Repeating courses and midterm exam									
9	Explanations of the methods used in the measurements	ne	Usage of the gas and PM devices in the lab							
10	Measurements under real applications Presentation of processes of the chose Stack characteristics		Measurement of sta	ack gases						
11	Assessment and presentation of data according to the regulations.		Results – calculation	ons and presentation						
12	Measurements under real applications (Particulate), Presentation of processe chosen firm, Stack characteristics		Measurement of pa							
13	Assessment and presentation of data according to the regulations		PM determination, Results – calculations and presentation							
14	Special topics – Sampling of toxic air pollutants		Employed devices and sample collection							
22	Textbooks, References and/or Other Materials:		1. Methods of air sampling and analysis / James P. Lodge, editör							
Activit	es		Number Duration (hour) Total Wor Load (hou							
Theore	ical		14	2.00	28.00					
Practic	als/Labs		14	2.00	28.00					
Self st	EARNING ACTIVITIES IN	JUMBE	WEIGHT	3.00	30.00					
Homev			2	10.00	20.00					
Midlect	g Exam 1		25 ₂ 00	20.00	40.00					
Field S	tudies		0	0.00	0.00					
HRANGA	workameject 2	2	17100	20.00	20.00					
Others			2	10.00	20.00					
Fotal E	xams 6	6	100.00	25.00	25.00					
Total V	Vork Load				211.00					
Total w	ork load/ 30 hr				7.03					
ECTS	Credit of the Course				6.00					
Total			100.00							
Measu	rement and Evaluation Techniques Use	ed in the								
24	ECTS / WORK LOAD TABLE									
25	CONTRIBUTION O			450 TO DDOOD 4						

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

ÖK3	0	0	3	0	0	4	0	0	0	0	0	0	0	4	4	0
ÖK4 3 0 0 0 0 3 0 0 3 0 0 0 0 0 0 0 0 0 0											0					
Contrib 1 very low 2 low ution Level:						3 1	Medi	um	4 High			5 Very High				