



MARMARA UNIVERSITY - Faculty of Engineering

Environmental Engineering

SYLLABUS

2008-2009 Fall Semester

Course Code	Course Name	Course Type	Weekly Course Hours			Credits	ECTS	
			T	A	L			
ENVE424	Anaerobic Treatment	Elective	3	0	0	3	5	
Prerequisite		Prerequisite to						
Course Lecturer	Dr. Barış ÇALLI					Office Hours Schedule	Thursday 09:30-11:20	
E-mail	baris.calli@marmara.edu.tr					Office / Room No	MA 110F	
Phone	(0216) 348 02 92 / 120					Phone		
Teaching Assistant(s)						Office / Room No		
E-mail								

Campus / Weekly Time & Classroom Schedule

Göztepe
Wednesday 09:30-12:30
MB554

Course Objectives	Understanding the principles of anaerobic biochemistry and microbiology. Advantages and disadvantages of anaerobic treatment. Introduction of developments in anaerobic reactor technologies. Understanding the tools for process monitoring and control.
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Textbooks and/or References	1.	Anaerobic Digestion Processes in Industrial Wastewater Treatment, by S.M. Stronach, T. Rudd and J.N. Lester, Springer-Verlag, 1986.
	2.	Anaerobic Biotechnology for Industrial Wastewaters, by R. E. Speece, Archae Press, 1996.
	3.	Anaerobic Reactors, Biological Wastewater Treatment Series Vol. 4, by C.A de L. Chernicharo, IWA Publishing, 2007.

WEEK	Date	TOPICS
Week 1		Introduction to anaerobic treatment
Week 2		The biochemistry of anaerobic treatment
Week 3		The microbiology of anaerobic treatment
Week 4		Influence of environmental factors
Week 5		Toxic substances in anaerobic treatment
Week 6		Process monitoring and control in anaerobic treatment
Week 7		Anaerobic reactor technologies
Week 8		Anaerobic sludge digestion
Week 9		Anaerobic sludge digestion
Week 10		Presentation of term projects-1
Week 11		Presentation of term projects-2
Week 12		Presentation of term projects-3
Week 13		Presentation of term projects-4
Week 14		

Reference No - Section

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)
	Final Exam	1		40
	Final Make-up Exam (if exists)	1	--	40
	Semester Evaluation			60
	Midterm(s)		03.12.2009	20
	Quiz(zes)		--	
	Project(s)		-	40
	Homework(s)		--	
	Laboratory		--	
Other		--		

Weight in Semester Evaluation (%)

0
0
100
33,3
66,7

*** Lifelong Learning Programme (LLP) *** Language of Instruction:

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours	--	42,0	Applied Hours	--	0,0
Midterm	1	8,0	Final	1	12,0
Quiz			Project	1	36,0
Laboratory			Homework	1	3,0
Atelier			Seminar		
Field Study			Presentation	1	8,0
Other			Self Study	1	16,0
TOTAL :				6	125,0

Recommended ECTS Credit (Total Hours / 25) : 5