AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Waste Water Treatment								
Course Code	ÇS207		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	3	Workload	75 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course: it provides to have knowledge about features of the waste water, treatment methods and its effects on human and environmetal health.								
Course Content	The general characteristics of wastewater's parameters, treatment methods include sludge treatment and reuse of waste water stabilization areas.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Individual Study								
Name of Lecturer(s)	Prof. Canan HAZIR								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Çevre ve Orman Bakanlığı, Atık Su Yönetimi, Murat Ersin ŞAHİN.
2	Atık Su Arıtma Tesisleri Teknik Usüller Tebliği, 20 Mart 2010 tarih ve 27527 sayılı Resmî Gazete'de yayınlanmıştır
3	. Interactive tour of Advanced Wastewater Treatment Plant in Washington, DC District of Columbia Water and Sewer Authority http://www.dcwasa.com/about/tour_flash.cfm

Week	Weekly Detailed Course Contents	
1	Theoretical	General properties of waste water
	Preparation Work	Projection apparatus, slate, supporter books
2	Theoretical	Parameters of waste water
	Preparation Work	Projection apparatus, slate, supporter books
3	Theoretical	Waste water treatment methods
	Preparation Work	Projection apparatus, slate, supporter books
4	Theoretical	Physical treatment methods
	Preparation Work	Projection apparatus, slate, supporter books
5	Theoretical	Biological treatment methods
	Preparation Work	Projection apparatus, slate, supporter books
6	Theoretical	Biologic treatment: aerobically treatment
	Preparation Work	Projection apparatus, slate, supporter books
7	Theoretical	Biologic treatment: anaerobically treatment,
	Preparation Work	Projection apparatus, slate, supporter books
8	Intermediate Exam	Midterm
9	Theoretical	Advanced waste water treatment
	Preparation Work	Projection apparatus, slate, supporter books
10	Theoretical	Nitrogen removal and control
	Preparation Work	Projection apparatus, slate, supporter books
11	Theoretical	Phosphor removal
	Preparation Work	Projection apparatus, slate, supporter books
12	Theoretical	Chemical oxidation
	Preparation Work	Projection apparatus, slate, supporter books
13	Theoretical	Sludge treatment
	Preparation Work	Projection apparatus, slate, supporter books
14	Theoretical	Sludge stabilization methods
	Preparation Work	Projection apparatus, slate, supporter books

15	Theoretical	Reuse of treated waste water
	Preparation Work	Projection apparatus, slate, supporter books

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	7	2	2	28
Midterm Examination	1	7	1	8
Final Examination	1	10	1	11
			Total Workload (Hours)	75
			[Total Workload (Hours) / 25*] = **ECTS**	3

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	To learn the waste water’s features.
2	To learn the waste water’s parameters.
3	To get the knowledge about the first stage waste water treatment
4	To get the knowledge about the second stage waste water treatment
5	To get the knowledge about the third stage waste water treatment
6	To get the idea about reuse of treated waste water

Programme Outcomes *(Environmental Health)*

1	They have the appropriate level of knowledge about the basic sciences which has an interaction with the environment and the environment itself.
2	They have gained the basic concepts, skills and qualifications in the Environmental health theorical and practical lessons. And then they can establish the connections that are necessary to protect the environment and people's health in the light of these competencies.
3	They can use the approaches and the information of basic and applied research in different disciplines. They can follow the innovations and developments in their field, and have self-development competency with the terms of the day.
4	They know and apply the analysis methods used in the evaluation of environmental factors (drinking water, waste water treatment, air pollution, meteorological data, land values, food control, radiation measurement, etc.).
5	They have a professional and ethical consciousness, and have the ability to recognize the environmental problems and also can formulate a solution to these problems. They apply the gained knowledges and skills faced in real life situations, transfers the knowledge to individuals around, and wins the life-long learning behavior.
6	They are able to use their professional knowledge in their lives and behave sensitively toward the local and global environmental problems and effectively uses to the legislation and management tools the necessary for the solution.
7	Gained the ability to adapt the changing in a positive way themselves, to understand the core values and cultures of the society which are living. Sensitive to the universal and the social values, interests of the country, have adopted the concept of sustainable development, environmentally conscious, productive, behaves aware of the ethical and professional responsibility.
8	Provides a healthy interact of individual, society and the environment and take responsibility in the necessary situations for the continuity.
9	They gain the ecologically-based solving skills the problems and the delays that may arise in interaction with each other of living and nonliving environment. Interests of local and national, and Ecological and historical values of our country, and contribute to the protection and the development of them.
10	Exhibits the appropriate behaviours for the protection and the development of plants, animals, and inanimate environment, and the especially human health.
11	Knows the value of energy for life, recognizes the types of energy, and have conscious of the importance, using and dissemination of renewable energy sources.
12	Knows the properties of information and communication technologies, and uses them in the process efficiently and professionally.
13	They aware of the democracy, rule of law, human rights, the national and universal cultural characteristics, and sensitive towards to the nature, society and people.
14	Knows the importance of Ataturk’s principles and reforms, make them a way of life.
15	Uses effectively the Turkish in speaking and writing.
16	Has at least one foreign language ability to be able to follow the knowledge in their profession and to communicate with colleagues.
17	To have the appropriate knowledge of medical sciences at the level of interest, to use specific medical terms and terminology of field

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5	L6
P1	5	5	4	4	4	5
P2	4	4	5	5	5	5
P4	4	5	5	5	5	1
P9	4	2	2	2	2	3
P10	3	2	2	2	2	5