

Course Title-Course Code: ÇEV-517 WATER QUALITY							Name of the Programme: ENVIRONMENTAL SCIENCES				
Term	Teaching Methods							Credits			
	Lecture	<i>Recite</i>	Lab.	Project Res.		Term Paper	Other	Total	Credit	ECTS Credit	
1-2	42					100	46	188	3	7,5	
Language	Turkish										
Compulsory/ Elective	Elective										
Prerequisites	Basic environmental engineering knowledge										
Course Contents	This course is composed of four parts: Part I deals with quantities of water used and discharged through domestic, industrial, and agricultural use; physical, chemical, and biological characteristics of water and their significance; and global impacts of water quality. Analytical methods for use in water quality modeling and the analysis of treatment processes and fundamental modeling principles explained are developed in Part II are applied to streams, lakes, reservoirs, and groundwater systems in Part III. Physical, chemical, and biological methods of water quality modification are treated in Part IV.										
Course Objectives	The principle objective in this course was to provide an introduction to water quality management that would be suitable for all under graduate students. This course progresses in a logical fashion from the characterization of water quality, to the significance of the various contaminants, to the methods used to describe changes in water quality in the environment, to water and wastewater treatment.										
Learning Outcomes and Competences	Students in engineering and other related disciplines will learn all of the basic information and concepts of water management and gain experiences that they will use in water quality management.										
Textbook and/or References	<ul style="list-style-type: none"> <li>- Tshobanoglous, G., Schroeder, E.D., "Water Quality: Characteristics, Modeling, Modification" Addison-Wesley Publishing Company, Canada, 1987.</li> <li>- Twort, A.C., Ratnayaka, D.D., Brandt, M.J., "Water Supply" IWA Publishing, London, 2000.</li> </ul>										
Assessment Criteria								If any, mark as (X)	Percent (%)		
	Midterm exams							X	30		
	Quizzes										
	Homework										
	Projects										
Term paper							X	20			

	<b>Laboratory work</b>		
	<b>Other</b>	X	10
	<b>Final exam</b>	X	40
<b>Instructors</b>	Yrd.Doç.Dr. Beril (Salman) Akin      bsakin@gazi.edu.tr		

<b>Week</b>	<b>Subject</b>
1	Sources and uses of water
2	Physical, chemical, and biological characteristics of water
3	Significance of the characteristics of water
4	Water and hydrologic cycle
5	Water quality in rivers and streams
6	Groundwater and water quality
7	Lakes, wetlands and water quality impacts
8	Examination I
9	Water quality: Standards and global perspectives
10	Analytical methods for water quality management
11	Stoichiometry, reaction kinetics, and materials balance
12	Mathematical Models of physical systems
13	Modification of water quality
14	Examination II