



YOZGAT BOZOK UNIVERSITY FACULTY OF ARTS AND SCIENCES
CHEMISTRY DEPARTMENT COURSE PLAN

Course Code	Course Title	Semester	Course Type (C/E)	T+A+L (Time/Week)	Credit	ECTS	Course Language
KİM719	Waste Water and Treatment Techniques		E	2+0+0	2	5	Turkish

COURSE INFORMATION

Course Catalog Description (Content)	Waste water, Cleaning of dirty water, Waste water treatment, Treatment units, physical, chemical and biological treatment.
The Aim of the Course	Evaluation of water treatment, which is an indispensable substance for life and the basic substance of civilization, and explaining its importance.
Course Level	Undergraduate
Course Language	Turkish
Teaching method	(X) Formal () Online (X) Mixed/Hybrid
Teaching Staff of the Course	Prof. Dr. İsmail AKDENİZ
Prerequisite Course(s) of the Course	-
Learning Outcomes from the Course	<ol style="list-style-type: none">1. Students will have skill for evaluation of water sources in Turkey and the world, the importance of drinking and wastewaters after has gained enough knowledge on water.2. Students will learn basic concepts of water quality and quantity3. Students will be able to understand and use analytical methods required for water quality control4. Students will learn and identify basic of chemical reactions in water, and discuss on aquatic behaviours such as acid-base, solubility, precipitation and redox reactions5. Participates in interdisciplinary studies by using the basic knowledge of the field and analytical thinking ability.

COURSE CONTENT

Week	Theory	Practice/Laboratory
1	Waste Water	
2	Cleaning Dirty Water	
3	Pollutant Sources	
4	General Composition of Wastewater	
5	Waste Water Treatment	
6	Treatment Units	
7	Physical Treatment	
8	Chemical Treatment	
9	Chemical Treatment	
10	Biological Treatment	
11	Biological Treatment	
12	Treatment System Selection	
13	Some Example Wastewater Facilities from the World	

14	Waste Water Facilities in Our Neighborhood					
15	Final Exam					
Course Learning Resources						
<ol style="list-style-type: none"> 1. Su Kimyası, H. Mutluay, A. Demirak, Beta basım yayım Dağıtım 2. Su Kirliliği ve Kontrolü, O. Uslu, A. Türkman, T.C Başbakanlık Çevre Genel Müdürlüğü Yayınları Eğitim Dizisi 3. Water Chemistry, V.I.Snoeyink, D. Jenkins. John Wiley 4. Su Teknolojisi, H. Yalçın, M. Gürü, Palme Yayıncılık 						
ASSESSMENT CRITERIA						
Work Activities During the Semester	Number	Contribution				
Homework						
Practice						
Forum/ Discussion Application						
Short Exam (Quiz)	3	100				
Ratio Of Semester Studies To Semester Success (%)		50				
Ratio of Final to Success (%)		50				
Total		%100				
COURSE WORKLOAD TABLE						
Activity	Total Weeks	Duration (Weekly Hours)	Total Workload			
Theory	14	2	28			
Practice						
Forum/ Discussion Application						
Reading						
Internet Scanning, Library Study	14	2	28			
Material Design, Application						
Report Preparation						
Presentation Preparation	14	2	28			
Presentation						
Final Exam	1	2	2			
Preparation for the Final Exam	1	10	10			
Other(s) (Preparation for Quizzes and Exams)	3	10	30			
Total Workload			126			
Total Workload / 25 (s)			126/25			
ECTS Credits of the Course			≅5			
Note: The workload of the course will be determined by the instructor on a per-course basis.						
PROGRAM LEARNING OUTPUTS CONTRIBUTION LEVELS						
No	Program Learning Outputs	1	2	3	4	5
1	Gains extensive knowledge about the basic chemical properties of matter and uses this knowledge in daily life, industrial scale, and practical chemistry and shares them with the society.				X	
2	Performs experiments, collects data, interprets, evaluates					X

	results, defines problems parallel to current technological developments, produces solutions against problems encountered in the laboratory.					
3	Calculates and processes chemical information and data.					X
4	Applies her/his knowledge and understanding of chemistry to the solution of unconventional qualitative and quantitative problems.			X		
5	Defines and comprehends chemical concepts and theories in Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Analytical Chemistry, Biochemistry.					X
6	Can conduct research in the light of scientific data on any subject in the field of chemistry.			X		
7	Writes, presents, discusses scientific material, and presents it orally to a knowledgeable audience.		X			
8	Brings a chemical approach to the solution of environmental problems, makes environmental analyzes and reports.			X		
9	Knows a foreign language at a level to read and understand the basic terms and processes of the chemist profession.	X				
10	Can use computer software and information and communication technologies at the level required by the field.	X				
11	Adapts and transfers the knowledge gained in the field to secondary education.				X	
12	Apart from the field of chemistry, she/he gains knowledge in different branches of science that she feels close to.			X		
13	Carries out a study independently, makes group work and gains the awareness of taking responsibility.			X		
14	They can develop a positive attitude towards lifelong learning and constantly renew their professional knowledge and skills.				X	
15	Have sufficient awareness of the universality of social rights, social justice, quality culture and protection of cultural values, environmental protection, occupational health and safety.				X	

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