



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
KİM 241	Analytical Chemistry II	4	C	4+0+0	4	6	Turkish

COURSE INFORMATION

Course Catalog Description (Content)	Titrimetric Methods, Precipitation Titrimetry, Principles of Neutralization Titrations, Titration Curves for Complex Acid-Base Systems, Applications of Neutralization Titrations, Complexation Reactions and Titrations, Introduction to Electrochemistry, Applications of Standard Electrode Potentials, Applications of Oxidation - Reduction Titrations
The Aim of the Course	The purpose of this course is to learn the chemical principles that are important for analytical chemistry and the modern analytical techniques, to evaluate the experimental data by using the statistical methods, to gain the laboratory skills for obtaining the high quality data.
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 learn the basic chemical principles in analytical chemistry.2. Students will evaluate the experimental data.3. Students will learn modern analytical methods.4. Students will gain the laboratory skills to obtain the high quality analytical data.5. Defines and comprehends chemical concepts and theories in Analytical Chemistry.

COURSE CONTENT

Week	Theory	Practice/Laboratory
1	Titrimetric Methods; Precipitation Titrimetry	
2	Titrimetric Methods; Precipitation Titrimetry	
3	Principles of Neutralization Titrations	
4	Titration Curves for Complex Acid/ Base Systems	
5	Titration Curves for Complex Acid/ Base Systems	
6	Volumetric analysis basic principles and applications	
7	Applications of Neutralization Titrations	
8	Applications of Neutralization Titrations	
9	Complexation Reactions and Titrations	
10	Complexation Reactions and Titrations	
11	Introduction to Electrochemistry, Applications of Standard Electrode Potentials	

12	Introduction to Electrochemistry, Applications of Standard Electrode Potentials	
13	Applications of Oxidation /Reduction Titrations	
14	Applications of Oxidation /Reduction Titrations	
15	Final Exam	

Course Learning Resources

1. Fundamentals of Analytical Chemistry, D. A. Skoog , D. M. West, F.J. Holler S. College Pub. US, 1996
2. Quantitative chemical analysis, D.C. Harris, W.H. Freeman and Company, US, 1982

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	4	56
Practice	14	2	28
Forum/ Discussion Application			
Reading	14	1	14
Internet Scanning, Library Study	14	3	42
Material Design, Application			
Report Preparation			
Presentation Preparation			
Presentation			
Final Exam	1	2	2
Preparation for the Final Exam	1	10	10
Other(s) (Preparation for Quizzes and Exams)	3	3	9
Total Workload			161
Total Workload / 25 (s)			161/25
ECTS Credits of the Course			≅6
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 results, defines problems parallel to current technological developments, produces solutions against problems encountered in the laboratory.					X
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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