



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
KİM701	Sampling and Sample Preparation		E	2+0+0	2	4	Turkish

COURSE INFORMATION

Course Catalog Description (Content)	Sample preparation in chemical analysis, sample types, sample amounts, real samples, representative samples, sampling errors, solid, liquid gas sampling, laboratory sampling, automated sample preparation, Sample Preparation by Selected Analytical Method.
The Aim of the Course	To provide students with sufficient knowledge about the basic principles of how to make sampling for chemical analysis and how to prepare it for analysis.
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 learn to evaluate the physical and chemical principles used during the measurements and the analysis results.2. Performs experiments, collects data, interprets, evaluates results, defines problems parallel to current technological developments, produces solutions against problems encountered in the laboratory.3. Calculates and processes chemical information and data.4. Defines and comprehends chemical concepts and theories in Analytical Chemistry.5. Applies her/his knowledge and understanding of chemistry to the solution of unconventional qualitative and quantitative problems.

COURSE CONTENT

Week	Theory	Practice/Laboratory
1	Analytical Samples	
2	Sample Types	
3	Sample Quantities	
4	Real Samples	
5	Taking Representative Samples	
6	Errors in Sampling	
7	Raw Sample	
8	Sampling Solids	
9	Sampling of Liquid Solutions	
10	Sampling from Gas Solutions	
11	Laboratory Sample Collection	
12	Automatic Sample Preparation	

13	Sample Preparation According to the Selected Analytical Method	
14	Sample Preparation According to the Selected Analytical Method	
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	2	28
Practice			
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			105
Total Workload / 25 (s)			105/25
ECTS Credits of the Course			≅4
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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