



**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
KİM709	Art in Chemistry	1-2	E	2+0+0		4	Turkish

**COURSE INFORMATION**

<b>Course Catalog Description (Content)</b>	Molecular structure, symmetrical structures, crystal structures, color change, fluorescent property, beautifully structured polymers, supramolecular structure, nanofloral structures, visually beautiful chemical reactions
<b>The Aim of the Course</b>	This course, which is based on two main themes, will cover beautiful reactions and beautiful structures. It is to show the beauty of chemistry to the student theoretically and visually.
<b>Course Level</b>	Bachelor degree
<b>Course Language</b>	Turkish
<b>Teaching method</b>	(X) Formal ( ) Online ( ) Mixed/Hybrid
<b>Teaching Staff of the Course</b>	Asst. Prof. Dr. Hatice ARI
<b>Prerequisite Course(s) of the Course</b>	-
<b>Learning Outcomes from the Course</b>	1- Be able to have information about the molecular structure. 2- Can explain chemical reactions. 3- Can learn and teach the beauty of chemistry. 4- Can make visually interesting chemical experiments. 5- Will be able to design the synthesis of compounds with good properties.

**COURSE CONTENT**

Week	Theory	Practice/Laboratory
1	Molecular structure	
2	Color change	
3	The art of crystallization	
4	Crystal structures	
5	Symmetry	
6	Symmetrical structures	
7	Fluorescent feature	
8	Extended coordination polymers	
9	Mechanically interlocked molecules	
10	Supramolecular structures	
11	Nanoflower structures	
12	Beautiful reactions (metal displacement reactions)	
13	Beautiful reactions (precipitation reactions and clear solutions)	
14	Beautiful reactions (bubbling and color changing reactions)	
15	Final Exam	

**Course Learning Resources**

1. D.B. Amabilino, V. Balzani, C.J. Brown, C.J. Bruns, L. Fabbrizzi, E. Marchi, K.N. Raymond, J.F. Stoddart, M. Venturi, J.-P. Sauvage, Editor: Luigi Fabbrizzi, Beauty in Chemistry, Springer, Italy, 2010.
2. Barbara R. Greenberg, Dianne Patterson, Art in Chemistry, Chemistry in Art, Teacher Ideas Press, 2nd ed (2008)

### ASSESSMENT CRITERIA

Work Activities During the Semester	Number	Contribution
Homework	1	30
Practice		
Forum/ Discussion Application		
Short Exam (Quiz)	2	70
Ratio Of Semester Studies To Semester Success (%)		%40
Ratio of Final to Success (%)	1	%60
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			
Individual study	14	1	14
Brainstorming	3	5	15
Presentation Preparation			
Presentation			
Final Exam	1	2	2
Preparation for the Final Exam	4	5	20
Diğer (Belirtiniz: Homework)	1	7	7
Total Workload			100
Total Workload / 25 (s)			100/25
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 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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