



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
ADSL-064	Art and Chemistry	1	E	2+0+0	2	2	Türkçe

COURSE INFORMATION

Course Catalog Description (Content)	Definition and purpose of art and chemistry, colors and paints, chemistry, clay-pottery-ceramic, glass, painting, sculpture, photography, etc. It includes theoretical topics such as the chemical properties of jewellery, the detection of counterfeiting in works of art, the chemical hazards faced by works of art and their protection and restoration, chemical and spectroscopic methods used to determine the properties of works of art.
The Aim of the Course	The aim of this course is to explain the bond between art and chemistry, to talk about the content of chemicals used in artworks and the effects of the development in chemistry on artworks, to explain the chemical hazards that artworks face and to increase students' awareness by giving information about their protection and restoration, To give information about chemical and spectroscopic methods.
Course Level	Lessons will be given remotely via online education. The lecture notes of the lecturer and the books, articles and similar resources will be used as the source.
Course Language	Bachelor degree
Teaching method	Türkçe
Teaching Staff of the Course	(X) Formal () Online () Mixed/Hybrid
Prerequisite Course(s) of the Course	Asst. Prof. Dr. Hatice ARI
Learning Outcomes from the Course	-
Course Catalog Description (Content)	<ol style="list-style-type: none">1. Can deepen their understanding of the links between chemistry and art.2. By learning the chemical properties of paints, they can have an idea about their use in works of art.3. Have knowledge about the chemicals used in works of art such as clay, pottery, ceramics, glass, painting, sculpture, photography and the like.4. Can learn the chemical properties of jewels and explain the chemical processes applied to them.5. Can list the methods applied to determine whether works of art are real or fake.6. Learns the ways of protecting works of art from chemical hazards and can learn about how their restoration is done.7. Gain information about chemical and spectroscopic methods used to determine the properties of works of art.

COURSE CONTENT

Week	Theory	Practice/Laboratory
1	The relationship between chemistry and art	
2	The use of chemistry in art, the effects of the development of chemistry on art	
3	Colors and paints	

4	Clay-pottery-ceramic art and chemistry	
5	glass art and chemistry	
6	Painting and chemistry	
7	Sculpture and chemistry	
8	photography and chemistry	
9	Gems and chemistry	
10	Methods of detecting forgery in art	
11	Conservation and restoration of works of art	
12	Chemical hazards in art	
13	Chemical methods used to determine the properties of works of art	
14	Spectroscopic methods used to determine the properties of works of art	
15	Final Exam	

Course Learning Resources

1. Barbara R. Greenberg, Dianne Patterson, Art in Chemistry, Chemistry in Art, Teacher Ideas Press, 2nd ed (2008)
2. Anne Gaquere-Parker, Cass D. Parker, Chemistry and Art, Kendall Hunt Publishing; 2nd ed (2014)
3. Lecture notes, current resources (websites, articles, etc.)

ASSESSMENT CRITERIA

Work Activities During the Semester	Number	Contribution
Homework	2	%40
Practice	-	-
Forum/ Discussion Application	-	-
Short Exam (Quiz)	3	%60
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
Attending the Class	14	2	28
Self Study	1	3	3
Brainstorming	5	1	5
Reading	3	1	3
Homework	2	1	2
Quiz	3	1	3
Self Study for Quiz	3	1	3
Final Exam	1	1	1
Preparation for the Final Exam	1	3	3
Total Workload			51
Total Workload / 25 (s)			51/25
ECTS Credits of the Course			2.04\cong2
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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