



**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
KİM722	Boron Chemistry	1-2	E	2+0+0		5	Turkish

**COURSE INFORMATION**

<b>Course Catalog Description (Content)</b>	Introduction to Boron Chemistry, Boron-Oxygen Compounds, Boron Halides, Boranes (Boron Hydrides), Carboranes, Other Boron Compounds.
<b>The Aim of the Course</b>	The aims of this course are to learn boron chemistry by defining the basic concepts and to learn the reactions of some boron-containing compounds in detail.
<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>	Prof. Dr. Mustafa SAÇMACI
<b>Prerequisite Course(s) of the Course</b>	
<b>Learning Outcomes from the Course</b>	1. Explain the importance of boron for human life and Turkey. 2. Classifies boron compounds. 3. Learn the basic concepts of boron chemistry 4. Gains information about the presence and importance of boron in Turkey. 5. Knows the reactions of boron compounds, also known as boron derivatives, has a level of knowledge to follow the relevant literature.

**COURSE CONTENT**

Week	Theory	Practice/Laboratory
1	Presence and importance of boron in Turkey	
2	Chemistry of compounds containing boron-boron bond	
3	Structure of boron hydrides	
4	Metal Borides	
5	Metal boranes	
6	Carboboranes	
7	Heteroatomic boron compounds	
8	Chemistry of boronic and borinic acids	
9	Chemistry of boronic and borinic acids	
10	Chemistry of compounds containing boron-nitrogen bond	
11	Chemistry of compounds containing boron-nitrogen bond	
12	Article reviews	
13	Article reviews	
14	Article reviews	
15	Final Exam	

**Course Learning Resources**

1. Inorganic Chemistry, D.F. Shriver, P.W. Atkins, C.H. Langford, (Translation Editors: Özkar, S., Çetinkaya, B., Gül, A., Gök, Y.) Bilim Publishing-Ankara, 2003.

### ASSESSMENT CRITERIA

Work Activities During the Semester	Number	Contribution
Homework	1	%30
Practice		
Forum/ Discussion Application		
Short Exam (Quiz)	2	%35
Ratio Of Semester Studies To Semester Success (%)		%40
Ratio of Final to Success (%)	1	%60
<b>Total</b>		<b>%100</b>

### COURSE WORKLOAD TABLE

Activity	Total Weeks	Duration (Weekly Hours)	Total Workload
Theory	14	2	28
Practice			
Forum/ Discussion Application			
Reading	14	3	42
Internet Scanning, Library Study	14	2	28
Material Design, Application			
Report Preparation			
Presentation Preparation			
Presentation			
Final Exam	1	2	2
Preparation for the Final Exam	4	6	24
Other(s) (Specify: ... ..)			
<b>Total Workload</b>			
<b>Total Workload / 25 (s)</b>			124/25
<b>ECTS Credits of the Course</b>			124/25 $\cong$ 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 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			

<b>9</b>	Knows a foreign language at a level to read and understand the basic terms and processes of the chemist profession.			<b>X</b>		
<b>10</b>	Can use computer software and information and communication technologies at the level required by the field.				<b>X</b>	
<b>11</b>	Adapts and transfers the knowledge gained in the field to secondary education.			<b>X</b>		
<b>12</b>	Apart from the field of chemistry, she/he gains knowledge in different branches of science that she feels close to.				<b>X</b>	
<b>13</b>	Carries out a study independently, makes group work and gains the awareness of taking responsibility.				<b>X</b>	
<b>14</b>	They can develop a positive attitude towards lifelong learning and constantly renew their professional knowledge and skills.				<b>X</b>	
<b>15</b>	Have sufficient awareness of the universality of social rights, social justice, quality culture and protection of cultural values, environmental protection, occupational health and safety.			<b>X</b>		

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