

<b>Identification</b>	<b>Subject</b>	CHEM 111 Chemistry-1 6 ECTS		
	<b>Department</b>	Chemistry and Chemical Engineering		
	<b>Program</b>	Undergraduate		
	<b>Term</b>	Fall 2023		
	<b>Instructor</b>	Valida Aliyeva		
	<b>E-mail:</b>	valiyeva@khazar.org		
	<b>Phone</b>	+994 50 995 40 04		
	<b>Classroom/hours</b>	206 O/ 13.40-15.10 202 N/ 13.40-15.10		
	<b>Office hours</b>			
<b>Prerequisites</b>				
<b>Language</b>	English			
<b>Compulsory/Elective</b>	Compulsory			
<b>Required textbooks and course materials</b>	<ul style="list-style-type: none"> <li>▪ Chemistry (5th edition) written by Raymond Chang and Kenneth A. Goldsby in pdf published in 2008 [1]</li> <li>▪ Chemistry The Central Science 14th Edition in pdf published in 2017 [2]</li> </ul>			
<b>Website of course</b>	This course is based on traditional face-to-face classes.			
<b>Teaching methods</b>	<b>Lecture</b>	<b>X</b>		
	<b>Group discussion</b>	<b>X</b>		
	<b>Practical tasks</b>	<b>X</b>		
<b>Evaluation</b>	<b>Methods</b>	<b>Date/deadlines</b>	<b>Percentage (%)</b>	
	<b>Homework</b>	Every week	5	
	<b>Participation</b>	Each lesson	5	
	<b>Quiz</b>	Week 3, 10, 13	15	
	<b>Midterm Exam</b>	Week 7	20	
	<b>Presentation/Group work</b>	Week 3-15	15	
	<b>Final Exam</b>		40	
	<b>Total</b>		100	
<b>Course outline</b>	<p>The fundamental course Chemistry 1, sometimes known as "Introductory Chemistry" or "General Chemistry," is frequently offered at the college or high school level. The goal of this course is to give students a solid foundation in the ideas and theories that support the study of matter and its changes. Chemical Periodicity, Chemical Nomenclature, Atomic Structure, Chemical Bonds, Reactions, Stoichiometry, Thermodynamics, States of Matter, and other topics are discussed. For more in-depth research in chemistry and related subjects, Chemistry 1 serves as a basis. It is a key subject for anyone interested in the natural sciences or engineering since it gives pupils the knowledge and abilities</p>			

	they need to comprehend and manipulate matter.
<b>Course objectives</b>	<p>The following are common course objectives that are typically associated with Chemistry 1:</p> <ul style="list-style-type: none"> <li>▪ Fundamental Knowledge:</li> <li>▪ Scientific Method:</li> <li>▪ Chemical Nomenclature</li> <li>▪ Chemical Equations</li> <li>▪ Stoichiometry</li> <li>▪ Atomic and Molecular Structure</li> <li>▪ Chemical Bonding</li> <li>▪ States of Matter</li> <li>▪ Thermodynamics</li> <li>▪ Acids and Bases</li> </ul>
<b>Learning outcomes</b>	<p>Here are some common learning outcomes associated with introductory chemistry courses:</p> <ul style="list-style-type: none"> <li>▪ Recognize the essential principles and ideas of chemistry.</li> <li>▪ Use mathematical and scientific concepts to address quantitative issues in stoichiometry, thermodynamics, and chemical processes.</li> <li>▪ Create and analyze chemical equations and formulas.</li> <li>▪ Recognize the impact of chemical bonds on a substance's characteristics.</li> <li>▪ Be aware of the variables affecting the speeds of chemical reactions.</li> <li>▪ Recognize and group acids and bases.</li> <li>▪ Determine the pH and pOH of basic and acidic solutions.</li> </ul>
<b>Policy</b>	<ul style="list-style-type: none"> <li>▪ <b>Homework</b> The topics covered in class are often covered through homework assignments. You can strengthen your understanding of important concepts by doing puzzles and activities on your own. Your understanding of fundamental concepts like atomic structure, chemical processes, and stoichiometry is strengthened as a result of your active participation.</li> <li>▪ <b>Participation</b> For a variety of reasons, participation in a classroom context is essential. It is essential to the learning process, promotes teamwork, and aids in the general success of both the individual students and the class as a whole.</li> <li>▪ <b>Presentation/Group work</b> Students frequently have to explain difficult chemical ideas to their classmates when they work in groups or make presentations. As they must break it down into simpler terms and respond to inquiries from their classmates, teaching others can help students get a deeper knowledge of the content..</li> <li>▪ <b>Quiz</b> A consistent method of gauging your understanding of the content covered in class is through quizzes. They assist you and your teacher in evaluating your comprehension of important ideas and identifying any areas that can benefit from more explanation.</li> <li>▪ <b>Withdrawal (pass/fail)</b> The School Science and Engineering grading guidelines are carefully adhered to throughout this course. In order to pass, a student must typically receive a mark of at least 60%. If the student fails, the course.</li> <li>▪ <b>Cheating/plagiarism</b> Any form of plagiarism or cheating on a test, quiz, or project will result in the cancellation of the assignment. In this scenario, the student will receive a score of zero (zero) without any further consideration.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ <b>Professional behavior guidelines</b> During class hours, students are expected to conduct themselves in a way that fosters a positive academic and professional atmosphere. Discussions without permission and unethical conduct are absolutely forbidden.</li> <li>▪ <b>Ethics</b> In class, students shouldn't be late. During class, all electronic devices must be put away and turned off.</li> </ul>
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<b>Tentative Schedule</b>		
<b>Weeks</b>	<b>Topics</b>	<b>Reference books</b>
1	Introduction	[1], [2]
2	Atoms, molecules and ions	[1], [2]
3	Chemical Reactions and reaction stoichiometry	[1], [2]
4	Reactions in aqueous solution	[2]
5	Gases	[2], [1]
6	Electronic structure and atoms	[1], [2]
7	<b>Mid Exam</b>	
8	The periodic table	[1], [2]
9	Chemical bonding : The covalent bond	[2], [1]
10	Physical properties of solutions	[1]
11	Chemical kinetics	[2], [1]
12	Chemical equilibrium	[2], [1]
13	Acid and bases	[2], [1]
14	Thermodynamics	[1]
15	Chemistry of the environment	[2]
<b>Final Exam</b>		