

<b>Identification</b>	<b>Subject</b>	GEOL203, General Geology, 6 ECTS
	<b>Department</b>	Petroleum Engineering
	<b>Program</b>	Undergraduate
	<b>Term</b>	Spring 2026
	<b>Instructor</b>	Fuad Aliyev
	<b>E-mail:</b>	<a href="mailto:fuad.aliyev@khazar.org">fuad.aliyev@khazar.org</a>
	<b>Classroom/hours</b>	11 Mehseti str. (Neftchilar campus)
<b>Language</b>	English	
<b>Compulsory/ Elective</b>	Compulsory	
<b>Required textbooks and course materials</b>	<ul style="list-style-type: none"> <li>• <i>Stanley Chernicoff, 2007. Geology, An Introduction to Physical Geology, 679 pages [1]</i></li> <li>• <i>Steven Earle, 2015 Physical Geology – 2nd edition, 600 pages [2]</i></li> <li>• <i>David D. Pollard and Raymond C. Fletcher, 2005 Fundamentals of Structural Geology Cambridge, 518 pages [3]</i></li> </ul>	
<b>Course outline</b>	<p>This course provides an introduction to the fundamental principles and concepts of geology. Students will explore the Earth's composition, structure, and dynamic processes, gaining an understanding of the geological forces that shape the planet. The course covers a range of topics, from minerals and rocks to plate tectonics, geological time, and Earth's history.</p> <p>The initial weeks of introduction to geology focus on establishing the significance of geology, exploring its historical development, and introducing students to the scientific methodology used in geological studies. This sets the groundwork for understanding the broader context of the course.</p>	
<b>Course objectives</b>	<p><u>Specific Objectives of the Course:</u></p> <ul style="list-style-type: none"> <li>- The course objectives for a General Geology course are to provide students with a comprehensive understanding of Earth's composition, structure, and dynamic processes.</li> <li>- Students will learn about minerals, rocks, plate tectonics, geological time, surface processes, structural geology, and Earth's history.</li> <li>- The course aims to develop hands-on skills in rock and mineral identification, map interpretation, and problem-solving.</li> <li>- Students will also gain an appreciation for the practical applications of geology in areas such as resource exploration, environmental management, and hazard mitigation.</li> </ul>	
<b>Learning outcomes</b>	<p>By the end of the course the students should be able to learn:</p> <ul style="list-style-type: none"> <li>- Importance of General Geology in Petroleum Engineering</li> <li>- Understanding of Earth's composition, structure, and dynamic geological processes</li> <li>- Explain the principles of plate tectonics and illustrate its role in shaping the Earth's surface</li> <li>- Apply geological principles to solve problems and think critically about geological processes</li> <li>- Communicate geological concepts clearly and effectively through written reports and oral presentations.</li> </ul>	
<b>Teaching methods</b>	<b>Lecture</b>	x

	<b>Group discussion</b>		x
	<b>Practical exercise</b>		x
	<b>Case analysis</b>		x
<b>Evaluation</b>	<b>Methods</b>	<b>Date/deadlines</b>	<b>Percentage (%)</b>
	<b>Midterm Exam</b>		30
	<b>Class Participation</b>		5
	<b>Assignment and quizzes</b>		15
	<b>Presentation/Group Discussion</b>		10
	<b>Final Exam</b>		40
	<b>Total</b>		100
	<b>Policy</b>	<ul style="list-style-type: none"> <li>• A midterm exam is an exam given near the middle of an academic grading term or near the middle of any given quarter or semester. The purpose of the examination is that students have a better idea of whether they're advancing well in the course.</li> <li>• The student receives 5 bonus points at the end of the semester if they attend all classes and follow all course policies and procedures.</li> <li>• Assessment of the participant's activity in lectures, practical classes, and in the learning process in general.</li> <li>• A quiz is a quick assessment of student knowledge to test a students' level of comprehension briefly regarding course material, providing teachers with insights into student progress and any existing knowledge gaps.</li> <li>• Presentation/Group Discussion will be conducted close to the end of semester. Date and time will be announced during the semester. A presentation/group discussion is a collaborative activity of students relating to research about geology. The reasons for including a presentation/group discussion in the subject course is to evaluate the students' individual presentation skills and ability to work in groups.</li> <li>• A final examination is an examination administered at the end of an academic term, with a set of questions or exercises evaluating the skill or knowledge of students given to students at the end of a course of study.</li> </ul> <p><b>Class assignments</b> Class assignments will be provided during class. The content will be based on the topics covered, and students will be required to conduct independent research and submit research papers.</p> <p><b>Quizzes</b> Quizzes will cover the materials studied in previous classes. There will be 2 quizzes during the semester.</p> <p><b>Presentation/Group Discussion</b> Students are required to prepare a presentation based on their individual assignments and deliver a slideshow during the final month of the session.</p> <p><b>Preparation for class</b> The structure of this course makes your individual study and preparation outside the class extremely important. The lecture material will focus on the major points introduced in the text. Reading the assigned chapters and</p>	

having some familiarity with them before class will greatly assist your understanding of the lecture.

**Withdrawal (pass/fail)**

A student is normally expected to achieve a mark of at least 60% to pass. In case of failure, he/she will be required to repeat the course the following term or year.

**Cheating/plagiarism**

Cheating or other plagiarism during the Quizzes, Mid-term, and Final Examinations will lead to paper cancellation. In this case, the student will automatically get zero (0), without any considerations. After identification of cheating or plagiarism, any chance will not be given for correction and rewriting of the report.

**Professional behavior guidelines**

The students shall behave in a way to creates favorable academic and professional environment during the class hours. Unauthorized discussions and unethical behavior are strictly prohibited.

**Ethics**

Students must not be late to class. All mobile phones must be turned off and put away during the class.

**Expected behavior**

Includes attending all class activities; meeting deadlines; observing common courtesies to fellow students, teachers, and staff; being honest; making a diligent effort to learn; and does not engage in any disruptive irresponsible manner. Legitimate collaboration is encouraged but academic collusion or dishonesty will not be tolerated.

**Illness**

Students with an illness may miss a quiz or presentation. This might be because the student needs to go to the hospital, recover at home, or attend regular medical appointments. In this case, the student must inform the instructor in advance about the illness and must present a document from their doctor. After considering the situation, the instructor may set a new date for the quiz or project presentation. Only one opportunity will be given to the student. The students who do not inform the instructor in advance will not be given a chance to retake the quiz or give a presentation.

**Tentative Schedule**

<b>Week</b>	<b>Date/Day (tentative)</b>	<b>Topics</b>	<b>Textbook/Assignments</b>
1		An Introduction to Geology: Development of the Geology, Earth’s Spheres, Early Evolution of the Earth	[1] Chapter 1
2		Minerals: What is a mineral, mineral structure, how minerals are identified, common rock-forming minerals	[1] Chapter 2
3		Igneous Processes and Igneous Rocks: melting rocks and crystallizing magma, intrusive rock formations, plate tectonics and igneous rock	[1] Chapter 3

4		Weathering: the breakdown of rocks, weathering processes, soils and soil formation	[1] Chapter 5
5		Sedimentation and Sedimentary Rocks: the origins of sedimentary rocks, classifying sedimentary rocks	[1] Chapter 6
6		Metamorphism and Metamorphic Rocks: conditions promoting metamorphism, types of metamorphism, metamorphic rocks	[1] Chapter 7
7		Telling Time Geologically: geological time in perspective, determining relative and absolute age, the geological time scale	[1] Chapter 8
8		<b>Mid-Term Exam</b>	
9		Shaping the Earth's Crust: folds, faults and mountains, stressing and straining rocks	[1] Chapter 9
10		Geophysical Properties of Planet Earth: investigating the Earth's interior, taking the Earth's temperature, the Earth's gravity	[1] Chapter 11
11		Earthquakes: the causes and effects of earthquakes	[1] Chapter 10
12		Streams and Floods: The Earth's water, streams, the geological work of streams	[1] Chapter 14
13		Groundwater: groundwater recharge and flow, tapping the groundwater reservoir	[1] Chapter 15
14		Desert and Wind Action: identifying deserts, the work of water and wind in deserts	[1] Chapter 18
15		Human Use of the Earth's Resources: reserves and resources, fossil fuels, alternative energy resources, mineral resources	[1] Chapter 20
16	<b>TBA</b>	<b>Final Exam</b>	

This syllabus is a guide for the course and any modifications to it will be announced in advance.