Identification	**Subject**	ENV 305 Health, Safety and Environment, 6 ECTS
	Department	Petroleum Engineering
	Program	Undergraduate
	Term	Fall, 2025
	Instructor	Gunay Muradova Ph.D. student
	E-mail:	gunay.muradova@khazar.org
	Office hours	Friday
Prerequisites	None	
Language	English	
Compulsory/Elective	Required	
Required textbooks and course materials	1. *Hughes, P., & Ferrett, E. (2015). Introduction to health and safety at work: For the NEBOSH national general certificate in occupational health and safety. Routledge.* 2. *World Health Organization. (2002). Occupational health: A manual for primary health care workers. In Occupational health: a manual for primary health care workers.* 3. *Ferrett, E. (2015). Health and safety at work revision guide: for the NEBOSH national general certificate in occupational health and safety. Routledge.*	
Course outline	The main aim of this module is to prepare students for their future professional career and instill safe working behaviors in them. This course outline covers important topics in health, safety and environmental management. It provides a structured approach to educate participants about HSE principles, practices and regulations with the aim of developing a safe and sustainable work environment. It covers topics such as Hazard identification and risk assessment methods, Occupational health and safety regulations, Principles of environmental management, including pollution prevention and waste management, Use and selection of personal protective equipment (PPE), Development of HSE management systems, Safety culture. An HSE course usually refers to an educational curriculum focused on Health, Safety and Environmental (HSE) management practices in the workplace. These courses are designed to provide participants with the knowledge, skills and tools to effectively identify, assess and mitigate risks associated with health, safety and environmental hazards in a variety of work settings. These courses are often in construction, manufacturing, oil and gas, healthcare, etc. tailored to specific industries or sectors. HSE is essential to ensure a safe and healthy working environment for both employers and employees, to comply with regulations, to reduce workplace accidents and incidents and to minimize environmental impact.	
Course objectives	The objective of the module is to teach the students about all types of hazards. including anthropogenic and natural hazards existing at universities, home and workplaces. The module covers hazards identification, analysis methods, and control. methods, usage of safety equipment and other necessary theoretical and practical skills.	

	The hazards response measures are based on local and international standards. will be delivered to the HSE classes by case studies. materials, technical means, presentations and facilitation.	
Learning outcomes	• Here is some potential learning outcomes related to Health, Safety, and Environment (HSE) training: • Understanding HSE Regulations and Standards: Participants should be able to demonstrate an understanding of relevant laws, regulations, and industry standards pertaining to health, safety, and environmental practices in their specific field or workplace. • Identification of Hazards: Learners should be able to identify various hazards present in their work environment, including physical, chemical, biological, and ergonomic hazards. • Risk Assessment Skills: Participants should be able to conduct thorough risk assessments to identify potential risks associated with specific tasks or processes, and to prioritize them based on severity and likelihood of occurrence. • Safety Procedures and Protocols: Students should be familiar with safety procedures and protocols relevant to their workplace, including emergency response procedures, safety equipment usage, and evacuation plans. • Safety Culture Awareness: Learners should understand the importance of fostering a safety culture within their organization, including promoting open communication, reporting near misses, and encouraging proactive hazard identification and mitigation. • Personal Protective Equipment (PPE) Knowledge: Participants should be able to identify appropriate PPE for various tasks or hazards, understand how to properly use and maintain PPE, and recognize when PPE needs to be replaced or upgraded. • Environmental Awareness and Protection: Students should understand the impact of human activities on the environment and be aware of strategies for minimizing environmental harm, such as waste reduction, pollution prevention, and sustainable resource management. • Health Promotion and Wellbeing: Learners should understand the importance of promoting physical and mental health in the workplace, including recognizing signs of stress, fatigue, and other health-related issues, and knowing how to access relevant support services. • Incident Investigation and Reporting: Participants should be able to effectively investigate workplace incidents, near misses, and accidents, identify root causes, and develop corrective and preventive actions to mitigate future risks. • Continuous Improvement: Students should recognize the importance of ongoing evaluation and improvement of HSE processes and practices, including participating in regular audits, inspections, and reviews to identify areas for enhancement.	
Teaching methods	Lecture	X
	Group discussion	X
	Experiential exercise	X

<table>
<tr><td></td><td colspan="2">Case analysis</td><td>X</td></tr>
<tr><td rowspan="7">Evaluation</td><td>Methods</td><td>Date/deadlines</td><td>Percentage (%)</td></tr>
<tr><td>Midterm Exam</td><td></td><td>30</td></tr>
<tr><td>Activity</td><td>During the semester</td><td>5</td></tr>
<tr><td>Assignment and quizzes</td><td>Week 5,10,14</td><td>15</td></tr>
<tr><td>Individual presentation</td><td>information will be provided</td><td>10</td></tr>
<tr><td>Final Exam</td><td></td><td>40</td></tr>
<tr><td>Total</td><td></td><td>100</td></tr>
<tr><td>Policy</td><td colspan="3">• 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.
• The student receives 5 bonus points at the end of the semester if they attend seminars, conferences, fieldwork and follow all course policies and procedures.
• Assessment of the participant’s activity in lectures, practical classes, and in the learning process in general.
• 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.
• • The student must submit his individual presentation on the given date. The presentation fully covers the topic and must not be less than 20 slides. The presentation should have tables and graphs.
• A final examination is an exanimation 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.</td></tr>
<tr><td></td><td colspan="3">▪ Class assignments
Class assignments will be provided during class. The contents will be based on the calculation of formation properties etc.
▪ Quizzes
Quizzes will cover the materials studied in previous classes. There will be 2 quizzes during the semester.
▪ Preparation for class
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 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</td></tr>
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	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, no chance will be given for correction and rewriting of the report. ▪ **Professional behavior guidelines** The students shall behave in a way to create a 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.

Tentative Schedule

Week	Date/Day (tentative)	Topics	Textbook/Assignments
1	Week 1	Introduction to HSE	[1] p.15-35
2	Week 2	Foundations in health and safety	[1] p. 46-52
3	Week 3	Accident and Risk assessment	[2] p.14-41
4	Week 4	Hazards and their control	[2] p.56-74
5	Week 5	Occupational diseases and conditions	[2] p.12-22
6	Week 6	Employee welfare	[1] p.4-18
7	Week 7	Midterm exam	
8	Week 8	Safety culture	[3] p.19-30
9	Week 9	Fire protection and prevention	[2] p.15-35
10	Week 10	Electrical Safety	[3] p.25-37
11	Week 11	First aid and its practice	[1] p.37-59
12	Week 12	Petroleum and chemical wastes and treatment methodologies	[2] p.90-141
13	Week 13	Fieldwork	
14	Week 14	Chemical and biological health hazards and risk control	[1] p.12-18
15	Week 15	Physical and Psychological health hazard and risk control	[1] p.19-35
	TBA	**Final Exam**	

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