

<b>Identification</b>	<b>Course</b>	<b>PETE 202: Introduction to Petroleum Engineering 6 ECTS credits</b>	
	<b>Department</b>	Petroleum Engineering	
	<b>Program</b>	Undergraduate	
	<b>Term</b>	Fall, 2023	
	<b>Instructor</b>	Gunay Muradova	
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	<b>Phone:</b>	(+994 12) 421-79-16 ext. 243	
	<b>Office hours</b>	Monday- Friday, 10.00-17.00	
<b>Prerequisites</b>	Consent of instructor		
<b>Language</b>	English		
<b>Compulsory/Elective</b>	Required		
<b>Required textbooks and course materials</b>	Richard L.Christiansen, John R Fanchi “Introduction to Petroleum Engineering” 2017		
<b>Course outline</b>	This course is designed for the Petroleum Students and other Technical Specialties. Course addresses the basic principles of Petroleum Engineering. Some concepts from Reservoir Engineering, Exploration, Drilling and Completion will be covered during the course. Practical exercises on reserve estimation and pore pressure calculations will be addressed.		
<b>Course objectives</b>	<p>This course is a major subject of Petroleum Engineering. This course is designed for the Petroleum Students and other Technical Specialties. .Some concepts from Reservoir Engineering, Exploration, Drilling and Completion will be covered during the course.</p> <p><b>Generic Objective of the Course:</b></p> <ul style="list-style-type: none"> <li>• To equip students with the basic concepts, methods and techniques in petroleum engineering.</li> <li>• To prepare students for the industry environment Specific Objectives of the Course:</li> <li>• To support the students academically, to improve their chance of realizing their potential</li> <li>• To encourage students participation and interaction and fostering atmosphere of tolerance and respect</li> <li>• To develop an understanding of the theory and practice of managerial analysis, and strategic decisions</li> </ul>		
<b>Learning outcomes</b>	<p>By the end of the course the students should be able:</p> <ul style="list-style-type: none"> <li>- To understand petroleum play</li> <li>- To be familiar with basics of exploration, drilling and completion</li> <li>- To estimate reserves</li> <li>- To understand reservoir engineering concepts</li> </ul>		
<b>Teaching methods</b>	Lecture		x
	Group discussion		x
	Case studies		x
<b>Grades</b>	<b>Evaluation Methods</b>		<b>Percentage (%)</b>
	Midterm Exam		30
	Activity		5
	Quizzes		15
	Presentation		10
	Final Exam		40
	Total		100
<b>Policy</b>	<b>Presentation</b> - to evaluate the students individual presentation skills and ability to work on groups. Presentation will be conducted close to the end of semester in December. Date and time will be announced during the semester. A presentation is a collaborative activity of students relating to research about formation evaluation		

techniques. 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.

**Assignments/quizzes** - to evaluate the ability of the student to cope with the given material. Quizzes will cover the materials covered in previous classes and will be consist of open-ended questions. Quizzes will be distributed throughout the classes. Overall 10 points will be given for two quizzes (5 for each). There will be 2 quizzes during semester. Anticipated week for the quizzes are week 7 and 13. Date and time will be announced a week before.

The student receives 5 points for the class participation and activity at the end of the semester if they attend all classes and follow all course policies and procedures.

Midterm exam will be carried out in the week announced by the university. Time allocated will be announced close to the midterm. A midterm examination is a test administered approximately midway through an academic grading term, be it a quarter or semester. Its primary objective is to provide students with a clearer assessment of their progress within the course, enabling them to gauge their performance and understanding up to that point.

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. Final exam date and time will be defined by the University. A final examination is an evaluative assessment presented to students at the conclusion of an academic term or course of study.

- **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. After the lecture, you should study your notes, assigned chapters and get ready for class assignments. Throughout the semester students will also have practical exercises and quizzes.

- **Withdrawal (pass/fail)**

This course strictly follows grading policy of Graduate School of Science, Art and Technology. Thus, 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.

- **Professional behavior guidelines**

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

- **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.

- **Class attendance**

Attendance is required! Please be in class on time. Attendance will be taken at the beginning of each class period. In case you are not present when attendance sheet is passed on, you will be marked absent. If students who are late for lessons for more than 10 minutes to class will be marked absent, despite this, the student can still attend the class. You shall receive 5 bonus points at the end of the semester if you attend all classes and follow all course policies and procedures.

- **Class discussion**

Feel free to voice your opinions and ask questions anytime during a class period. Practice your right and freedom to learn. Remember you are here to learn and we

are here to teach and that teaching and learning are forever intertwined. You can help me teach you as much as I can help you learn. Be an active participant in the learning process!

**Tentative Schedule**

<b>Week</b>	<b>Date/Day</b>	<b>Topics</b>	<b>Textbook/Assignments</b>
<b>1</b>	20.09.2023	Course Introduction	Chapter
<b>2</b>	27.09.2023	The context of Petroleum Geology	Chapter
<b>3</b>	04.10.2023	Physical and Chemical properties of Petroleum	Chapter
<b>4</b>	11.10.2023	Methods of Petroleum Exploration	Chapter
<b>5</b>	18.10.2023	Methods of Petroleum Exploration	Chapter
<b>6</b>	25.10.2023	Subsurface environment	
<b>7</b>	1.11.2023	Diagenesis, catagenesis, and metamorphism, thermal markers	
<b>8</b>	15.11.2023	Generation and Migration of Petroleum	Chapter
<b>9</b>	22.11.2023	<b>Mid-term Exam</b>	
<b>10</b>	30.11.2023	Petroleum System and Basin modelling	Chapter
<b>11</b>	6.12.2023	Reservoir	Chapter
<b>12</b>	13.12.2023	Traps and Seals:	Chapter
<b>13</b>	22.11.2023	Sedimentary basins and Petroleum	Chapter
<b>14</b>	27.12.2023	Nonconventional Petroleum shales	Chapter
<b>15</b>		<b>Final Exam</b>	

