Identification	**Subject**	PETE420, Reserve management, 6 ECTS	
	Department	Petroleum Engineering	
	Program (Undergraduate, Graduate)	Undergraduate	
	Term	Spring 2026	
	Instructor	Elvin Ahmadov	
	Email:	Elvin.ahmadov@socar.az	
	Classroom/hours	-	
Prerequisites	Petroleum Geology		
Language	English		
Compulsory/ Elective	Compulsory		
Textbooks and course materials	Presentation provided by instructor 1. PRMS – Petroleum Resources Management System. SPE/2018 2. Neft-qaz laylarının karbohidrogen ehtiyatlarının və resurslarının qiymətləndirilməsi. Salmanov Ə.M., Əhmədov E.H. və b., 2024		
Course description	This course will teach the requirements, application mechanisms, approaches, methods, and applications of the Petroleum Recurs Management System - PRMS. The advantages of the training are its clear explanation of the accounting, calculation, and management systems of hydrocarbon reserves using methods that are international systems in the world. The course will provide students with a comprehensive understanding of the methods and parameters for calculating geological, technical, and economically viable reserves.		
Course objectives	• General information reserve management (6GR, PRMS, RF-2011) • Geological reserve evolution, calculation parameters • Technical reserve evolution, uncertainty analysis • Economic reserve evolution and economic factors		
Learning Outcomes	**By the end of the course the students should be able to gain or improve the following skills:** • Ability to discuss the reserves category, reserves management approaches • Experience to calculate reserves for Azerbaijan field based • To understand reasons reserves category changes • Uncertainty analysis knowledge and skills • Crystal Ball software • Teamwork		
Teaching methods	**Case analysis**		v
	Group discussion		v
	Lecture		v
	Simulation		x

Evaluation Criteria	Methods	Date/deadlines	Percentage (%)
	Midterm Exam		30
	Quizzes		10
	Practical Assignments		10
	Activity		5
	Attendance		5
	Final Exam	**TBA**	40
	Total		100
Class Policy	• Group based practical project is going to be given in order to illustrate the practical significance of the theory taught in the classes. The project represents a collective endeavor undertaken by students within the realm of scientific inquiry. The incorporation of this project into the curriculum serves the dual purpose of showcasing the subject's research endeavors to potential students and illuminating the ongoing scholarly activities within the field. • 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. This assessment typically consists of a predefined set of questions or exercises designed to gauge students' proficiency and comprehension of the subject matter. • NO CELL PHONES are allowed during lecture. PLEASE turn them off before lecture! (Not silent or vibrating mode). This is a university policy and accepted by the department of PE, and violators will be reprimanded accordingly. • Participation and interaction in classes are more important than just attendance. • No late tasks/homework will be accepted. Homework is to be completed on an individual basis. Students may discuss homework with classmates, but students are responsible for their own work. If students have consulted classmates, please note the individuals name on the top of students' assignment. • Quizzes may be given unannounced throughout the term. • There will be no make-up quizzes. • No make-up exams. If students miss an exam, a zero score will be assigned to the missed exam. • If students should miss class due to personal emergency or medical reasons, please notify the instructor by email immediately. A doctor's note will be required for make-up work. • Students are responsible for completing the reading assigned from the textbook related to the covered topics and for checking email regularly for important information and announcements related to the course.		

	• Any form of plagiarism or cheating on a proposal, work plan, bibliography, presentation of literature review, final report will result in the cancellation of the work. In this case, the student will receive a mark of 0 without any further consideration. After identification cheating or plagiarism, NO CHANCE will be given for correction and rewrite report. • University policy on academic honesty concerning exams and individual work will be strictly enforced.

Tentative Schedule

Week	Date/Day (tentative)	Topics	Textbook/Assignments
1		The process of Exploration and Field Appraisal	[2] p. 7-10
2		Reserves management systems	[1] p 1- 4
3		Soviet Union system for reserves and resources management	[2] p. 10-18
4		International systems for reserves and resources management, Petroleum Resources Management System - PRMS	[1] p. 6-17, [2] p. 19-26
5		Reserves calculation methods (Volume and Statistics methods)	[1] p. 27-30, [2] p. 26-39
6		*Discussion of lessons by example*	
7		Monte-Carlo stimulation method for reserves evolution	[1] p. 29, [2] p. 40-46
8		Geological analysis of calculation parameters	[1] p. 26, [2] p. 49-64
9		Statistical analysis of calculation parameters	[1] p. 28, [2] p. 76-80
10	**Midterm Exam**		
11		*Practical Assignments – Case studies*	
12		Uncertainty analysis of reserves calculation parameters	[1] p. 11, [2] p. 80-106
13		Economic Criteria's	[1] p. 17-19
14		*Practical Assignments – Case studies*	
15		*Student presentations and discussions*	
Final Exam			