

Faculty of Engineering & Technology

Properties of Petroleum Fluids

Information :

Course Code : PE 301

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Professor	Ismail Shaaban Ismail Mahgoub	10
Lecturer	Mohamed Ghareeb Moustafa Ahmed	
Teaching Assistant	Abdelrahman Adel Abdullah Abdelghany Kandil	
Teaching Assistant	Reham Shawket Mostafa Taha Khalaaf	2

Area Of Study :

- Develop knowledge about the various properties of petroleum reservoir fluids
- Prepare to identification of reservoir fluid types
- Train to perform prediction of phase behaviour in both single phase and multi-component systems.

Description :

Physical properties of petroleum fluids; chemical components of petroleum fluids. Elementary phase behaviour; calculations of the physical properties of gases, liquids, and gas-liquid mixtures in equilibrium.

Course outcomes :

a. Knowledge and Understanding: :

1 -	Illustrate the various petroleum fluid types
2 -	Compare between the lab tests used to identify different fluid type and behaviour.
3 -	Explain the properties of each type of fluid as well as its phase diagram.

b. Intellectual Skills: :

1 -	Solve the reservoir fluid properties and composition
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c. Professional and Practical Skills: :

1 -	Practice basic experiments to perform the required lab tests to know reservoir fluid
2 -	Evaluate the different types of reservoir fluids

d. General and Transferable Skills: :

1 -	Collaborate effectively within multidisciplinary team.
2 -	Work in stressful environment and within constraints.
3 -	Communicate effectively

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction	5	3	2
Physical properties of petroleum fluids	10	6	4
Chemical components of petroleum fluids	5	3	2
Hydrocarbon phase behavior	15	9	6
Laboratory PVT Data	13	9	4
Physical properties of gas	15	9	6
Gas-Liquid mixtures in equilibrium	12	6	6

Teaching And Learning Methodologies :

Interactive Lecturing

Discussion

Problem-based Learning

Report

Experiential Learning

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment	5.00	5	
Final Exam	40.00	15	
Lab Exper.	10.00		
Mid- Exam I	25.00	1	
Oral Exam	5.00	7	
Quizzes	15.00	5	

Web Sites :

www.spe.org