

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
Assistant Lecturer	MOAMEN AHMED GASSER HASSAN KAMEL IBRAHIM KAMEL	
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.

<u>Course outcomes :</u>			
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.Intellectu	ual Skills: :		
1 -	- Solve the reservoir fluid properties and composition		
c.Professio	onal 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 :

Торіс	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	