FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

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 :

The course introduces the students to the various properties of petroleum reservoir fluids, lab, and field identification of reservoir fluid types, and prediction of phase behavior in both single phase and multi-component systems

Description :

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

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Acquire with the various petroleum fluid types
2 -	Recognize with 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 -	Analyse the different phase behaviours of the petroleum fluids
2 -	Solve the problem of unknown reservoir fluid and its physical properties and composition
c.Professional and Practical Skills: :	
1 -	Perform the required lab tests so as to know reservoir fluid
2 -	Identify the different types of reservoir fluids
d.General and Transferable Skills: :	
1 -	work in team
2 -	report clearly on laboratory PVT work
3 -	Report writing skills and presentation skills

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction	3	Introduction	
Physical properties of petroleum fluids	6	Properties of petroleum fluids	Discussion of Assignments and weekly work sheets
Chemical components of petroleum fluids	6	As above	As above
Hydrocarbon phase behavior	9	As above	As above
Laboratory PVT Data	9	As above	As above
Physical properties of gas	9	As above	As above
Gas-Liquid mixtures in equilibrium	3	As above	As above

Teaching And Learning Methodologies :

Weekly oral lectures using white board

PowerPoint presentations and data show with handouts

Short duration video tapes

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments	5.00		
Final Exam	40.00	15	
Midterm	30.00	7	
Quizzes	10.00	5	
Reports	5.00	5	
Weekly tutorials and attendance	10.00	1	

Course Notes :

Available on pdf files

Web Sites :

www.spe.org