Faculty of Engineering & Technology

Petroleum Reservoir Laboratory

Information :

Course Code :	PE 304	**Level :**	Undergraduate	**Course Hours :**	1.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	Mohamed Ghareeb Moustafa Ahmed	1
Lecturer	Mostafa Magdy El Sayed Abd El Hafiz	
Assistant Lecturer	YOUSSEF ELSAYED ABDELHAFEZ KANDIEL	

Area Of Study :

The Main Goals of this course are preparing student to:
Prepare to be aware of core lab devices.
Train to do successful core experiments
Develop skills to interpret experiment results.

Description :

Core analysis determination of intensive properties of crude oil and its products; equipment and methods used to obtain petroleum reservoir information.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Classify various rock and fluid properties.
2 -	Be familiar with all the skills needed to achieve all experiments.
3 -	List all the different methods to be used to measure reservoir rock properties.
b.Intellectual Skills: :	
1 -	Analyse lab tests result for reflecting reservoir rock and fluid properties.
2 -	Interpret the different results.
c.Professional and Practical Skills: :	
1 -	Determine the physical properties of reservoir rocks and fluids.
2 -	Perform practical application of the lab data for reservoir engineering.
3 -	Read/write professional laboratory reports.
d.General and Transferable Skills: :	
1 -	Work through a team work.
2 -	Communicate effectively.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Core sampling and plug properties	4		2
Laboratory measurements of porosity, permeability, fluid saturation, capillary pressure and interfacial tension, Wettability	16		16
Reservoir fluid properties characterization	4		4
Laboratory PVT Study	4		4
PVT report and analysis	4		4

Teaching And Learning Methodologies :

- Experiential Learning
- Research
- Discussion

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment	5.00		
Final Exam	40.00		
Lab	10.00		
Mid-Term exam	30.00		
Quizzes	5.00		
Reports	10.00		

Course Notes :

Available plot files + handouts.

Recommended books :

1. Djebblu Tiab, and Erle G. Donalson, Petrophysics theory and practice of measuring Reservoir Rock and fluids transport properties, 2012.
2. Lecture notes on the course Available pdf files + handouts.
3. Recommended Readings: www.spe.org.

Periodicals :

www.corelab.com

Web Sites :

www.corelab.com