

Faculty of Engineering & Technology

Reservoir Characterization

Information :

Course Code : PET 512

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	Mohamed Alaa Eldin Mohamed Abdelbakey	14
Lecturer	Mohamed Alaa Eldin Mohamed Abdelbakey	14
Assistant Lecturer	MOAMEN AHMED GASSER HASSAN KAMEL IBRAHIM KAMEL	
Assistant Lecturer	YOUSSEF ELSAYED ABDELHAFEZ KANDIEL	

Area Of Study :

Expand the scope of knowledge of the petroleum engineer to include one of the following topics:

- Collecting and analysing field data-Quantitative interpretation for well logging-
- Indicating porosity, Permeability and saturation-Methods of resistivity-
- Electromagnetic production logging and production logging.

Description :

Principles and techniques of petroleum reservoir characterization. Subsurface data from geological and engineering sources. Univariate and bivariate characterization Estimation techniques. Reserve estimation methods.

Course outcomes :

a.Knowledge and Understanding: :

- 1 - Explain how to collect field data
- 2 - Describe how to Analyze field data
- 3 - Identify the qualitative interpretation for well logging

b.Intellectual Skills: :

- 1 - Select the appropriate technique to collect data
- 2 - Detect porosity, permeability and saturation
- 3 - Identify method of measuring electric rock properties

c.Professional and Practical Skills: :

- 1 - Calculate porosity, permeability and saturation
- 2 - Perform electromagnetic production logging and production logging

d.General and Transferable Skills: :

- 1 - Work in team

2 -	Interpret available different types of production and artificial lift performance
3 -	Writing skills and presentation skills

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Collecting and analyzing field data	15	9	6
Quantitative interpretation for well logging	15	9	6
Indicating porosity, Permeability and saturation	15	9	6
Methods of measuring electric rock properties	15	9	6
Electromagnetic production logging and production logging	15	9	6

Teaching And Learning Methodologies :

Interactive Lecturing
Discussion
Problem solving
Experiential Learning

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
1st Midterm	15.00		
2nd Midterm	15.00		
Assignment	20.00		
Final Exam	40.00		
Performance	10.00		

Recommended books :

1. Text Book: Reservoir Characterization: Recent Advances, Richard A. Schatzinger / John F. Jordan
2. Lecture notes on the course Available pdf files + handouts
3. Recommended Readings (technical papers): Onepetro.org, sciencedirect.com, aga.org