

## Faculty of Engineering & Technology

### Petroleum Geology

#### Information :

**Course Code :** GEO 401

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Department of Petroleum Engineering

#### Instructor Information :

Title	Name	Office hours
Associate Professor	Moataz Mohamed Adel ElShafeiy	10
Assistant Lecturer	YOUSSEF ELSAYED ABDELHAFEZ KANDIEL	

#### Area Of Study :

Discussing the fundamentals of petroleum geology; source rock, reservoir, trap types, and Seal, Learning the principles of mapping a subsurface reservoir to estimate the volumetric hydrocarbon, Learning the Petroleum Geology of Egypt and the Tectonic framework in the different areas, (Gulf of Suez, Nile Delta, and Western Desert)., and Obtaining skills in correlating potential reservoir rocks and recognizing normal faults with log data.

#### Description :

Theory and practice of (mainly mining) geophysics. The basics of oil prospects, the acquisition, processing and interpretation of geophysical data, seismic stratigraphy,

#### Course outcomes :

##### **a.Knowledge and Understanding: :**

1 -	List the different source and reservoir rocks in the different sedimentary basins of Egypt as well as their tectonic framework.
2 -	Define the properties of reservoir rock and fluid in oil and gas bearing formation.
3 -	Outline geological anomalies and oil and gas traps and accumulations
4 -	Recognize Economical and feasibility assessment studies for developing new oil and gas fields

##### **b.Intellectual Skills: :**

1 -	Identify maps and reservoir traps
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##### **c.Professional and Practical Skills: :**

1 -	Compute the analysis of well logs, cross-sections and correlation.
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##### **d.General and Transferable Skills: :**

1 -	Collaborate effectively within a multidisciplinary teams.
2 -	Acquire entrepreneurial skills

#### Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Occurrence and origin of petroleum	5	3	2

### **Course Topic And Contents :**

<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial / Practical</b>
Petroleum Geology of Egypt and Tectonic framework	10	6	4
Reservoir rock	10	6	4
Reservoir pore spaces	10	6	4
Reservoir fluids	10	6	4
Carbonate reservoir rock	4	3	1
Source rock	8	6	2
Subsurface mapping	10	6	4
Entrapments	5	3	2

### **Teaching And Learning Methodologies :**

Interactive Lecturing  
Discussion  
Problem Solving  
Experiential Learning

### **Course Assessment :**

<b>Methods of assessment</b>	<b>Relative weight %</b>	<b>Week No</b>	<b>Assess What</b>
Final exam	40.00		
In Class Quizzes	10.00		
Lab	10.00		
Mid-Term exams	30.00		
Participations	10.00		