FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Engineering & Technology

Petroleum Engineering Design Project

Information :

Course Code :	PE 501	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	Mohamed Ghareeb Moustafa Ahmed	2
Lecturer	Omar Saad Ahmed Mahmoud	2
Lecturer	Mohamed Alaa Eldin Mohamed Abdelbakey	
Lecturer	Mohsen Gad Elkarim Elnoby Mohamed	2
Assistant Lecturer	MOAMEN AHMED GASSER HASSAN KAMEL IBRAHIM KAMEL	
Teaching Assistant	Mohamed Osama Mohamed Abbas	
Teaching Assistant	Safwat Ghazaly Mohamed El Rebba	
Teaching Assistant	Taha Abdelhamid Abdelmaqsoud Abdelhamid Yehia	
Teaching Assistant	Mohamed Osama Mohamed Abbas	
Teaching Assistant	Reham Shawket Mostafa Taha Khalaaf	
Teaching Assistant	Akram Rabie Hamed Ragheb Tobar	

Area Of Study :

Manage in group with opportunity to implement the appropriate concepts and techniques to design a particular project.
Implement industrial field data and use it in the designing a project.
Develop knowledge of the petroleum engineering project design.
Recognize to select the appropriate petroleum engineering technique to evaluate and predict the future performance of a specific field case study.

Description :

Senior capstone design project(s) based on industry data. -Application of reservoir engineering, drilling and production engineering principles to evaluate and solve an industry problem such as a new field development, evaluation of an existing reservoir asset, or analysis of field re-development.

Course outcomes :

a.Knowledge and Understanding: :

1 -	List reservoir applications to evaluate and solve an industry problem
2 -	Describe drilling engineering to evaluate and solve an industry problem
3 -	Explain production engineering to evaluate and solve an industry problem
4 -	Describe logging to evaluate and solve an industry problem

b.Intellectual Skills: :	
1 -	Investigate appropriate solutions for engineering problems based on analytical thinking and data collection.
2 -	Develop a creative and innovative way in problem solving and design.
c.Professional and Practical Skills: :	
1 -	Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to create proper project design.
2 -	Develop the engineering knowledge, understanding, collected data and feedback to make the integration of project design.
3 -	Apply practical knowledge in final presentations.
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 :

Topic	No. of hours	Lecture	Tutorial / Practical
Future Performance Prediction for Nameless Reservoir Using Material Balance Calculations and Decline Curve Analysis.	5	3	2
Determination of the OOIP for Water Drive Reservoirs with NO Prior Knowledge of Aquifer Properties and Geometry.	10	6	4
Comparative Investigation of Well Testing Results using Horner and Saphir Software for Pressure Buildup and Drawdown Tests.	5	3	2
Diagnoses and Management of Water Production Resources in Mature Sandstone Reservoirs Using TDT and CHFR Logging Data.	10	6	4
Maximize oil Recovery by using water Flooding Technique: Simulation Study.	5	3	2
Interactive Program for Drill String Failure Detection and Prevention before and while Drilling.	5	3	2
Basis of Ideal Well Design.	10	6	4
Developing a Reservoir Zonation and Characterization Using Core-Data.	5	3	2
Basic open and cased hole logging interpretation in Oil & Gas Zones.	5	3	2
Integration of geological & engineering data in the development of oil & gas fields.	10	6	4
Uncertainly Analysis of Archie's Parameters Determination Techniques and Water Saturation in Carbonate Reservoirs.	10	6	4

Teaching And Learning Methodologies :

Interactive Lecturing

Discussion
Report

Course Assessment :			
Methods of assessment	**Relative weight %**	**Week No**	**Assess What**
Final Presentation and Report	40.00		
Project preparation	15.00		
Weekly discussion with the project supervisor	45.00		

Recommended books :
All Petroleum Engineering References delivered previously by FUE

Periodicals :
Onepetro

Web Sites :
www.spe.org