

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	Mostafa Magdy El Sayed Abd El Hafiz	2
Lecturer	Omar Saad Ahmed Mahmoud	2
Lecturer	Mohamed Alaa Eldin Mohamed Abdelbakey	
Lecturer	Mohsen Gad Elkarim Elnoby Mohamed	2
Assistant Lecturer	YOUSSEF ELSAYED ABDELHAFEZ KANDIEL	
Teaching Assistant	Akram Rabie Hamed Ragheb Tobar	
Teaching Assistant	AHMED NAGUIB ABDELAZIZ ABDELAZIZ GHONIM	
Teaching Assistant	Reham Shawket Mostafa Taha Khalaaf	
Teaching Assistant	Taha Abdelhamid Abdelmaqsoud Abdelhamid Yehia	

Area Of Study :

1- Provide the student in group with opportunity to implement the appropriate

concepts and techniques to design a particular project.

2- Familiarize the students with the industrial field data and how to use it in the designing a project.

3- Enrich studentsak nowledge of the petroleum engineering project design.

4- Train students 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	

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b.Intellectu	al Skills: :		
1 -	Select appropriate solutions for engineering problems based on analytical thinking and data collection.		
2 -	Think in 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 -	Professionally merge the engineering knowledge, understanding, collected data and feedback to make the integration of project design.		
3 -	Apply practical knowledge in final presentations		
d.General a	and Transferable Skills: :		
1 -	Ability to work in a team.		
2 -	Ability to share ideas and communicate with others		
3 -	Ability to deal with others according to the rules of professional ethics.		

Course Topic And Contents :

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

Teaching And Learning Methodologies :

Interactive Lecturing



scussion	
roblem solving	
esearch	

Recommended books :

All Petroleum Engineering References delivered previously by FUE

Periodicals :

Onepetro

Web Sites :

www.spe.org