

Faculty of Engineering & Technology
Petroleum Economics and Asset Valuation

Information :

Course Code : PE 505 **Level :** Undergraduate **Course Hours :** 2.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	Alaa Mohamed Ali Ali	12
Teaching Assistant	Akram Rabie Hamed Ragheb Tobar	

Area Of Study :

The Main Goals of this course are: **E**nrich students knowledge for the difference between Petroleum macroeconomic and Petroleum microeconomic. **D**emonstrate knowledge and methods of predict, forecast, analysis and estimated the factors affecting on the international petroleum activities. **A**train students to predict oil and gas prices in the international petroleum markets.

Description :

Uncertainty in the estimation of oil and gas reserves; tangible and intangible investment costs; depreciation; evaluation of producing properties; federal income tax considerations; chance factor and risk determination. Petroleum economic evaluation software is introduced.

Course outcomes :

a. Knowledge and Understanding: :

1 -	Describe economic evaluation and economic analyses for petroleum projects and decision in different situation
2 -	Demonstrate the different economics indicator in evaluation petroleum project
3 -	Explain the evaluation of oil projects decisions related to the drilling activities, exploration and development activities
4 -	Illustrate the economic methods for value estimation of petroleum wells.
5 -	List the different factor effected in International oil market
6 -	Recognize International oil organization
7 -	Demonstrate the factors effect in the international oil market and how the price determined in international oil market

b. Intellectual Skills: :

1 -	. Apply different techniques for evaluate the petroleum decisions related to bid round development decision, drilling and completion well
2 -	Use the different methods for VALUATION OF Petroleum PROJECTS
3 -	Estimate the valuation of petroleum discovery
4 -	Choose between rental, purchase or lies for purchase petroleum assets
5 -	Select of international oil market condition (price and quantities)

c. Professional and Practical Skills: :

1 -	Use software tools for estimated . Cash flow . Net cash flow . Net present value to evaluate the petroleum assets and projects
2 -	Use software tools for estimated internal rate of return (IRR) , payback period . Discounted payback and the profitability index.

d. General and Transferable Skills: :

1 -	Communicate Effectively
2 -	Use efficiently IT capabilities
3 -	Collaborate effectively.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Petroleum Microeconomics and petroleum macroeconomics.	2	2	4
Cash flow . Discounted cash flow for petroleum projects	2	2	4
pay out / payback period./discounted pay back	2	2	4
Economic Yardsticks for petroleum projects- Present value and net present value- :IRR (internal rate of return) Rate of investment- Profitability index	4	4	8
Discovery and well economics valuation	4	4	8
OIL AND GAS Decision to Complete a Well	2	2	4
Assets valuation	4	4	8
OIL PEAK AND HUBBERT CURVE	2	2	4
OIL Economics In International Market	4	4	8
Forecasting	4	4	8

Teaching And Learning Methodologies :

Interactive Lecturing
Discussion & Problem solving

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
Mid-Term exams	50.00		
Participations	10.00		