PETROLEUM ECONOMICS AND FISCAL CONTRACT SYSTEMS IN OIL AND GAS
Petroleum engineers perform technical work to support the “business” objectives of the organization they work for (corporation, government). It is therefore important that they understand that “business” because it will influence the judgments they make. Economic evaluations provide the main source of the organization’s information by which investment and operational decisions are made regarding the most effective use of resources.

There are many subtleties and assumptions that underlie the apparently straight-forward economic calculations that are often seen. Consequently, a fundamental understanding of the concepts behind economic evaluation and of techniques for performing them within a petroleum context, are essential skills. Topics to be included are: oil & gas business context, economic and business concepts, cash-flows and petroleum fiscal regimes, time-value of money, discounted cash flow, net present value and other economic metrics, case study and portfolio management. If time permits, there will be an introduction to real options analysis and its application to valuing flexibility and risk.

The focus of the course is on the factors that drive exploration economics: risk/reward, capital requirements, terminology etc. This provides an excellent basis for understanding the unique aspects of development and production economics. Both industry and government points of view are addressed. A complete grasp of the subject requires an understanding of the dilemmas and concerns of both sides. However, there is also fertile ground in the philosophy of petroleum taxation. Legal and operational aspects of contract/fiscal terms are also examined to provide a foundation in the dynamics of international negotiations.
LEARNING OUTCOMES

By the end of this course, delegates should be able to;

1. Understand the broader oil & gas industry context within which economic evaluations take place, including societal and ethical factors that impact organizational (public, private and national) business goals.

2. Know (recall, define, describe) and comprehend (explain) the main concepts, terminology, tools and processes used in economic evaluations (oil & gas industry and for personal).

3. Recall and describe key cash flow components (including taxes) and be able to compute a Net Cash Flow (NCF).

4. Recall and describe key factors that effect the time value of money and compute a Discounted Cash Flow (DCF).

5. Calculate and interpret measures of the economic value of a DCF and be able to use them to make investment recommendations, both stand-alone and portfolio.

6. Comprehend how economic evaluations are typically performed and used in practice through a real industry case study.

7. Understand the capabilities of commercial economic evaluation software (PEEP) that is commonly used in the O&G industry.

8. As an effective team member, research a paper related to the course material, develop and present (using Powerpoint) a critical review of the paper, and evaluate its contribution to the literature of the topic area.

9. Develop a broader, contextual perspective of the business of petroleum, and project economics, by being able to identify credible papers, and reading, comprehending and evaluating them.

10. Be proficient in applying an expanded range of generic Excel capabilities (relevant to economic evaluation and other petroleum engineering problems).
COURSE OUTLINE

The main topics will include the followings amongst others:

Business Context of Economic Evaluation
  • Industry overview. Oil & gas decisions
  • Business concepts. Role of the Company and role of Engineers in decisions
  • Introduction to Project Economics

Project cash flows
  • Cash Flow Components – types and sources of information
  • Depreciation and Depletion

Fiscal regimes
  • Overview
  • Concessions in Nigeria
  • Production Sharing Contracts
  • Nigerian Fiscal Regimes

Time-Value of Money
  • Economic Equivalence
  • The Earning Power of money - Interest Calculations and Financial Mathematics
  • The Purchasing Power of Money - Inflation

Evaluating Investment Opportunities
  • Payout and discounted payout
  • Present-worth (NPV) analysis
  • Rate-of-return analysis
  • Capital Efficiency

Case Study & Software Demo (PEEP)

Project Presentations

Self-directed learning on Economic Evaluation topics
REGISTRATION & ENQUIRIES

Duration: 5 days
Registration: N15,000 (non-refundable)
Tuition: N270,000 only

FOR FURTHER ENQUIRIES, PLEASE CONTACT:
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