QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1964

Petroleum Economics & Oil and Gas Industry Fundamentals Training Course

PETROLEUM ECONOMICS, ENERGY MARKETS & COMMERCIAL MANAGEMENT
OIL & GAS

DURATION
5 Days

DELIVERY
Classroom

Course Overview

The Petroleum Economics & Oil and Gas Industry Fundamentals Training Course provides a comprehensive foundation in the technical, economic, commercial, and operational principles of the petroleum industry. The program is designed to help participants understand how hydrocarbons are explored, developed, produced, processed, transported, traded, and marketed, while connecting technical activities with the economic factors that drive investment and business performance.

Participants will examine the complete oil and gas value chain, from exploration and geological evaluation through drilling, field development, production, processing, transportation, refining, petrochemicals, and final markets. The course provides sufficient technical context for non-technical professionals while developing the commercial and economic understanding required for effective decision-making.

A central focus is petroleum economics, including reserves and resources, production profiles, capital and operating costs, revenue generation, project cash flows, economic indicators, fiscal considerations, breakeven analysis, sensitivity analysis, and investment evaluation. Participants will learn how changes in production, costs, commodity prices, and project assumptions influence economic outcomes.

The program also examines global petroleum markets, pricing mechanisms, supply and demand, market cycles, geopolitical influences, industry risks, and the evolving energy landscape. Through practical exercises, case studies, economic evaluations, and industry scenarios, participants will develop a well-rounded understanding of the petroleum business and its commercial drivers.

Objectives

- By the end of the course, participants will be able to:
- Explain the fundamental concepts, terminology, and structure of the oil and gas industry.
- Analyze the major stages of the petroleum value chain.
- Distinguish between exploration, appraisal, development, production, processing, transportation, and refining activities.
- Evaluate the economic factors influencing petroleum projects.
- Analyze reserves, resources, production profiles, and field development assumptions.

- Assess capital expenditure and operating expenditure requirements.
- Develop basic petroleum project cash flow models.
- Evaluate project profitability, economic viability, and investment attractiveness.
- Apply breakeven, sensitivity, and scenario analysis to petroleum projects.
- Analyze oil and gas pricing mechanisms and market drivers.
- Assess the impact of supply, demand, inventories, and geopolitical developments on petroleum markets.
- Evaluate commercial and operational risks affecting petroleum projects.
- Understand the relationship between technical decisions and economic performance.
- Support investment and business decisions using petroleum economic analysis.
- Assess emerging trends affecting the future of the oil and gas industry.
- Develop an integrated understanding of petroleum economics and industry fundamentals.

Who Should Attend

This course is designed for professionals who are new to the oil and gas industry or require a broader understanding of petroleum operations and economics. It is particularly suitable for commercial, finance, procurement, contracts, supply chain, human resources, administration, planning, strategy, and business development professionals working with energy organizations.

It is also relevant to engineers, geoscientists, project managers, economists, financial analysts, investment professionals, government officials, regulators, and technical specialists who need to understand the commercial and economic implications of petroleum industry activities.

The program is particularly valuable for national and international oil companies, exploration and production companies, drilling contractors, oilfield service providers, refineries, petrochemical companies, pipeline operators, energy traders, government energy organizations, financial institutions, investment firms, and major industrial companies.

Learning Outcomes

- Upon completion of the course, participants will be able to:
- Describe the structure and major activities of the global oil and gas industry.
- Explain the technical and commercial stages of the petroleum value chain.
- Understand the basic principles of exploration, drilling, field development, and production.
- Interpret key petroleum reserves, resources, and production concepts.
- Assess the economic implications of field development and production decisions.
- Distinguish capital and operating cost components within petroleum projects.
- Construct and interpret simplified petroleum project cash flows.
- Evaluate project economics using profitability and investment measures.
- Perform basic breakeven, sensitivity, and scenario analysis.
- Interpret oil and gas prices and the factors that influence them.
- Analyze basic supply, demand, inventory, and market balance information.
- Evaluate the impact of geopolitical and economic developments on petroleum markets.
- Identify key commercial, technical, operational, and market risks.
- Connect technical project decisions with financial and commercial outcomes.
- Support business and investment discussions using petroleum economics principles.
- Develop a comprehensive industry perspective that supports cross-functional decision-making.

Course Outline

DAY 01

Oil & Gas Industry Fundamentals and Petroleum Value Chain

- Structure and characteristics of the global petroleum industry.
- Oil and gas industry terminology and key concepts.
- Upstream, midstream, and downstream activities.
- Exploration and geological evaluation.
- Seismic surveys and prospect identification.
- Drilling and well construction fundamentals.
- Field appraisal and development planning.

DAY 01 — CONTINUED

- Oil and gas production fundamentals.
- Gathering, processing, and transportation.
- Refining and petroleum products.
- Petrochemicals and downstream value creation.
- Global petroleum value chains and industry participants.

PRACTICAL APPLICATION

Map the complete petroleum value chain for a selected oil and gas project and identify the main technical, operational, and commercial activities at each stage.

DAY 02

Petroleum Reserves, Resources, Production, and Field Development

- Understanding petroleum resources and reserves.
- Reservoir fundamentals and hydrocarbon accumulation.
- Exploration risk and prospect evaluation.
- Appraisal and resource assessment.
- Field development concepts.
- Well planning and production systems.
- Production profiles and decline behavior.
- Recovery factors and production optimization.
- Enhanced oil recovery concepts.
- Field development expenditure and operating requirements.
- Production forecasting and uncertainty.
- Linking technical field assumptions with economic outcomes.

PRACTICAL APPLICATION

Evaluate a simplified field development scenario and assess reserves, production assumptions, development requirements, and key economic considerations.

DAY 03

Petroleum Economics and Project Evaluation

- Principles of petroleum economics.
- Capital expenditure and operating expenditure.
- Revenue estimation and production-based income.
- Petroleum project cash flow structures.
- Time value of money.
- Discounted cash flow analysis.
- Net present value and internal rate of return.
- Payback and profitability analysis.
- Breakeven oil and gas prices.
- Fiscal and commercial considerations.
- Sensitivity and scenario analysis.
- Economic decision-making under uncertainty.

PRACTICAL APPLICATION

Develop a simplified petroleum project economic model and evaluate project attractiveness under alternative production, cost, and commodity price assumptions.

DAY 04

Oil & Gas Markets, Pricing, and Commercial Drivers

- Global oil and gas market structure.
- Supply and demand fundamentals.
- Production, consumption, and inventory dynamics.
- Crude oil and natural gas pricing.
- Benchmark prices and price differentials.
- Regional market differences.
- Refining economics and product markets.
- Energy trade flows and transportation.
- Market cycles and price volatility.

DAY 04 — CONTINUED

- Geopolitical and macroeconomic influences.
- Regulatory and policy considerations.
- Commercial implications of market changes.

PRACTICAL APPLICATION

Analyze a selected oil or gas market and assess the impact of supply, demand, inventories, prices, geopolitics, and market conditions on project economics.

DAY 05

Commercial Decision-Making, Risk, and Future of the Industry

- Integrating technical, economic, and commercial perspectives.
- Petroleum project risk identification.
- Technical, operational, financial, market, and geopolitical risks.
- Scenario planning and stress testing.
- Investment and portfolio decision-making.
- Commercial optimization across the petroleum value chain.
- Linking project economics with corporate strategy.
- Energy transition and changing petroleum demand.
- Technology and digitalization in the oil and gas industry.
- Emerging opportunities and industry challenges.
- Building resilient petroleum business strategies.
- Developing a framework for informed petroleum investment decisions.

FINAL WORKSHOP

Conduct an integrated evaluation of a hypothetical oil and gas project covering industry fundamentals, field development, production, costs, revenues, project economics, pricing, market conditions, risk, scenarios, and strategic investment recommendations.

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Register or Request More Information

Course page: https://quest-training.com/courses/petroleum-economics-oil-and-gas-industry-fundamentals-training-course
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