



*Training Course:
Petroleum Economics and Risk Analysis*

*13 - 17 October 2025
Singapore*

Training Course: Petroleum Economics and Risk Analysis

Training Course code: SC236276 From: 13 - 17 October 2025 Venue: Singapore - Training Course Fees: 6545 € Euro

Introduction

The oil and gas industry is characterized by high levels of uncertainty, capital intensity, and exposure to volatile markets. Understanding petroleum economics and risk analysis is crucial for making sound investment decisions, assessing project viability, and maximizing returns while mitigating risks. This program is designed by Global Horizon Training Center to equip professionals with the tools and knowledge required to evaluate petroleum projects, understand economic modeling, and apply risk analysis techniques to real-world scenarios.

Objectives

By the end of this program, participants will be able to:

- Understand fundamental concepts of petroleum economics and project evaluation.
- Apply economic indicators such as NPV, IRR, Payback Period, and Profitability Index to petroleum projects.
- Conduct cash flow modeling for exploration, development, and production scenarios.
- Assess the impact of oil price fluctuations, fiscal regimes, and taxation on project profitability.
- Develop skills in identifying, quantifying, and managing project risks.
- Apply probabilistic and deterministic approaches to risk and uncertainty analysis.
- Evaluate investment decisions under uncertainty using tools such as sensitivity analysis, Monte Carlo simulation, and decision trees.

Organizational Impact

Organizations investing in this program can expect to:

- Enhance decision-making processes by applying sound economic evaluation techniques.
- Improve project portfolio management by identifying high-value opportunities and avoiding unprofitable ventures.
- Strengthen resilience against market volatility through effective risk assessment.
- Optimize capital allocation and maximize return on investment in petroleum projects.
- Cultivate a workforce with advanced analytical and strategic thinking skills tailored to oil and gas industry dynamics.

Target Audience

This training program is designed for:

- Petroleum engineers, reservoir engineers, and geoscientists involved in project evaluation.
- Economists, financial analysts, and investment professionals in the oil and gas sector.
- Managers and decision-makers in exploration, production, and business development.
- Professionals in government agencies and regulatory bodies overseeing petroleum projects.
- New entrants in petroleum economics seeking structured training.

Outlines

Day 1: Fundamentals of Petroleum Economics

- Introduction to petroleum economics and its role in the oil and gas industry.
- Economic life cycle of petroleum projects: exploration, development, production, abandonment.
- Time value of money concepts: discounting, compounding, and annuities.
- Key economic indicators: NPV, IRR, Payback Period, Profitability Index.

Day 2: Cash Flow Modeling in Petroleum Projects

- Components of petroleum cash flow: revenues, costs, capital, and operating expenses.
- Oil and gas pricing mechanisms and their impact on revenues.
- Fiscal systems in petroleum projects: royalties, taxes, production sharing, service contracts.
- Modeling deterministic cash flows for petroleum projects.
- Case study: cash flow analysis for a sample development project.

Day 3: Risk and Uncertainty in Petroleum Projects

- Defining risk vs. uncertainty in petroleum economics.
- Sources of uncertainty: geological, technical, economic, and political risks.
- Sensitivity analysis: testing project resilience to changes in key variables.
- Scenario analysis: optimistic, pessimistic, and most-likely cases.

Day 4: Quantitative Risk Analysis Techniques

- Introduction to probabilistic risk analysis.
- Probability distributions in petroleum economics normal, lognormal, triangular, etc..
- Decision trees and expected monetary value EMV analysis.
- Monte Carlo simulation for petroleum project evaluation.
- Hands-on session: applying Monte Carlo simulation to project economics.

Day 5: Strategic Decision-Making and Case Studies

- Portfolio management in oil and gas projects.
- Evaluating investment decisions under uncertainty.
- Integrating risk analysis into corporate strategy and decision-making.
- Group case study: complete petroleum project evaluation and risk analysis.
- Final discussion: best practices in petroleum economics and risk management.

Registration form on the Training Course: Petroleum Economics and Risk Analysis

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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