

Petroleum Project Economics and Risk Analysis

Course code: OG-005



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— Workshop Overview

Petroleum projects require massive capital investment, long development cycles, and are highly exposed to market volatility, technical uncertainty, and geopolitical risks. Effective economic evaluation and risk analysis are essential for making sound investment decisions in the oil and gas industry. This course equips participants with the tools to evaluate project feasibility, assess financial returns, and manage risk across the project lifecycle. It is designed to help professionals improve investment decision-making, optimize capital allocation, and enhance project profitability.

Why Attend

This course combines petroleum economics theory with practical, industry-based case studies. Participants will work through real project valuation scenarios, risk modeling exercises, and investment decision simulations. Workshops will focus on cash flow modeling, sensitivity analysis, and risk assessment techniques. Interactive

Who Should Attend

Petroleum Engineers and Project Engineers
Finance and Investment Analysts in Oil & Gas
Project Managers and Cost Engineers
Reservoir and Production Engineers
Business Development and Strategy Professionals
Consultants and Energy Sector Professionals

— Learning Objectives

- Understand fundamentals of petroleum project economics
- Evaluate upstream oil and gas project feasibility
- Apply investment appraisal techniques such as NPV, IRR, and payback period
- Analyze cost structures and cash flow models in petroleum projects
- Identify and assess technical, financial, and market risks
- Perform sensitivity and scenario analysis
- Optimize investment decisions under uncertainty
- Support strategic capital allocation decisions

Course Outline

DAY
1

Fundamentals of Petroleum Economics

- Overview of petroleum project lifecycle
- Structure of upstream oil and gas economics
- Cost classification (CAPEX and OPEX)
- Revenue streams in petroleum projects
- Time value of money in energy investments

DAY
2

Investment Appraisal Techniques

- Net Present Value (NPV) analysis
- Internal Rate of Return (IRR)
- Payback period and profitability index
- Cash flow modeling fundamentals
- Decision criteria for project selection

DAY
3

Cost Estimation and Financial Modeling

- Capital cost estimation methods
- Operating cost analysis
- Building petroleum project cash flow models
- Production profiles and decline curves
- Economic life of oil and gas assets

DAY
4

Risk and Uncertainty Analysis

- Types of risks in petroleum projects
- Technical, operational, and market risks
- Sensitivity analysis techniques
- Scenario planning and decision trees
- Monte Carlo simulation overview

DAY
5

Strategic Decision-Making and Case Studies

- Portfolio management in petroleum investments
- Risk-adjusted decision-making
- Break-even analysis and price volatility impact
- Case studies of real oil and gas projects

- Final project: full economic and risk evaluation exercise

— Upcoming Classroom Dates

DATE	LOCATION	FEE
5 - 9 October 2026	Istanbul - Türkiye	€1,425
16 - 20 November 2026	London - United Kingdom	€2,125
7 - 11 December 2026	Barcelona - Spain	€1,925
21 - 25 December 2026	Istanbul - Türkiye	€1,425
18 - 22 January 2027	Amsterdam - Netherlands	€2,125
15 - 19 February 2027	Paris - France	€2,250
15 - 19 March 2027	Barcelona - Spain	€1,925
19 - 23 April 2027	London - United Kingdom	€2,100

— Certificate and Registration

Participants who attend and complete the full programme receive a SPARK Training Certificate of Completion. For registration, in-house delivery, or availability questions, contact info@sparktraining.eu or +31 85 115 0004.