

PETROLEUM PROJECT ECONOMICS AND RISK ANALYSIS

“Master Financial Evaluation and Risk Management Techniques for Profitable Petroleum Investments.”

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

Petroleum projects—whether exploration, production, refining, or distribution—require significant investment and are subject to high levels of uncertainty. The ability to accurately assess project economics and manage risks is essential for sound decision-making and long-term profitability.

The Petroleum Project Economics and Risk Analysis course provides a comprehensive understanding of how to evaluate the economic viability of petroleum projects under varying market, technical, and financial conditions. Participants will learn key principles of petroleum economics, cash flow modeling, fiscal regimes, and investment appraisal. The course also covers practical tools for identifying, quantifying, and mitigating risks throughout the project lifecycle.

Through hands-on exercises and real-world examples, participants will develop the analytical skills needed to make informed investment decisions and optimize project portfolios in the volatile energy industry.

Objectives

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

- Understand the fundamentals of petroleum project economics.
- Build and interpret cash flow models for oil and gas projects.
- Evaluate project profitability using NPV, IRR, payback period, and sensitivity analysis.
- Analyze fiscal regimes, taxation systems, and production sharing contracts.
- Apply risk assessment techniques to evaluate project uncertainties.
- Use Monte Carlo simulation and scenario analysis for decision-making.
- Develop strategies for investment optimization and risk mitigation.

Why Attend

Volatile oil prices, geopolitical uncertainties, and technical complexities make economic evaluation and risk management critical to success in petroleum projects. This course equips participants with the financial and analytical skills to evaluate investments, assess potential risks, and make decisions that balance profitability with long-term sustainability.

By attending, participants will gain a solid foundation in petroleum economics—an essential skill set for professionals involved in project planning, finance, management, and strategy within the oil and gas sector.

Target Audience

This course is designed for professionals involved in project evaluation, finance, and management, including:

- Petroleum and Reservoir Engineers
- Project and Planning Managers
- Energy Economists and Financial Analysts
- Business Development Executives
- Commercial and Investment Managers
- Government Energy Officials and Policy Advisors
- Accountants and Auditors in the Energy Sector

Individual Benefits

- Gain expertise in evaluating petroleum project investments.
- Learn to model project cash flows and analyze profitability.
- Improve your ability to identify and quantify project risks.
- Develop confidence in decision-making under uncertainty.
- Strengthen financial analysis and reporting capabilities.
- Enhance your career profile with a sought-after specialization.

Organizational Benefits

- Strengthen economic evaluation and investment decision processes.
- Improve accuracy in project forecasts and financial planning.
- Minimize project risks and enhance portfolio management.
- Ensure compliance with fiscal and contractual requirements.
- Foster strategic, data-driven decision-making culture.
- Increase the organization's financial resilience in volatile markets.

Instructional Methodology

This course combines theoretical knowledge with real-world applications to ensure participants can apply learned concepts directly in their work. The methodology includes:

- Interactive lectures and expert-led presentations
- Hands-on exercises in cash flow modeling and risk analysis
- Group discussions and case studies of real petroleum projects
- Sensitivity and scenario analysis workshops
- Monte Carlo simulation demonstrations
- Q&A sessions for personalized learning and clarification

MAWA EVENTS

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Course Outline

Module 1: Introduction to Petroleum Economics

- Overview of petroleum project evaluation
- Economic concepts and terminology
- The project life cycle in oil and gas
- Value creation and decision-making frameworks

Module 2: Cash Flow Analysis and Economic Indicators

- Revenue, cost, and investment structures
- Building project cash flow models
- Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period
- Profitability Index and decision criteria

Module 3: Fiscal Systems and Contractual Frameworks

- Royalty and tax systems
- Production sharing contracts (PSC)
- Service contracts and joint venture agreements
- Government participation and incentives

Module 4: Sensitivity and Scenario Analysis

- Identifying key economic variables
- Analyzing the impact of price, cost, and production uncertainties
- Building sensitivity models for decision support
- Scenario analysis and strategic planning

Module 5: Risk Identification and Quantification

- Types of risks in petroleum projects (technical, economic, political, environmental)
- Qualitative and quantitative risk assessment techniques
- Probability distributions and uncertainty modeling

Module 6: Monte Carlo Simulation and Risk Modeling

- Fundamentals of Monte Carlo simulation
- Applying simulation tools for economic evaluation
- Case studies using stochastic modeling
- Interpreting results for investment decisions

Module 7: Portfolio and Investment Decision-Making

- Evaluating multiple project options
- Ranking and selecting projects under uncertainty
- Capital budgeting and portfolio optimization
- Decision tree and real options analysis

Module 8: Economic Evaluation Case Studies

- Real-world examples from upstream and downstream projects
- Cost-benefit analysis and project benchmarking
- Lessons learned from successful and failed projects

Module 9: Project Financing and Fiscal Optimization

- Sources of financing for petroleum projects
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Financial structuring and capital allocation

- Tax optimization and cash flow improvement strategies

Module 10: Best Practices and Future Trends

- Integrating ESG and sustainability factors into project economics
- Digital tools for economic modeling and forecasting
- Global trends affecting petroleum investment decisions

Certification

Upon successful completion, participants will receive a Certificate in Petroleum Project Economics and Risk Analysis, recognizing their capability in financial modeling, project evaluation, and risk management within the oil and gas industry.

This certification demonstrates mastery of the essential tools and methodologies used by leading energy professionals worldwide, equipping participants to make informed and strategic economic decisions in an evolving global energy market.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation's unique goals.

In-House / Customized Training

Interested in running this course for your team?

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