



## Financial Modelling and Petroleum Project Economics

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## **Financial Modelling and Petroleum Project Economics**

**10 days training course**

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**For detailed information on training course dates, please click the link:**

**[Financial Modelling and Petroleum Project Economics](#)**

**Target Audience:**

This course is designed for professionals involved in financial planning, economic evaluation, and investment decision-making within the oil and gas sector, including:

- Financial Analysts and Economists in the Energy Sector
- Petroleum Engineers and Project Managers
- Investment and Risk Analysts
- Oil and Gas Consultants
- Energy Industry Executives and Decision-Makers

**Introduction:**

The oil and gas industry operates in a volatile and capital-intensive environment where financial modeling and project economics play a crucial role in decision-making. This course provides participants with a deep understanding of financial modeling techniques, economic evaluation, and risk assessment specific to the petroleum sector. Through practical exercises and real-world applications, participants will develop the skills needed to evaluate investment opportunities, optimize project performance, and manage financial risks.

**Training Objectives:**

By the end of this course, participants will:

- Master Excel-based financial modeling techniques for the oil and gas industry
- Analyze key financial and statistical metrics relevant to energy markets
- Evaluate investment opportunities using NPV, IRR, and other financial indicators
- Conduct risk and uncertainty analysis for petroleum projects
- Develop cash flow models for upstream and downstream operations
- Apply economic indicators and sensitivity analysis to decision-making
- Gain hands-on experience in petroleum project financial evaluation

## **Course Outline:**

# **Module 1: Financial Modelling in the Oil & Gas Industry**

## **Day 1: Excel Foundations for Oil & Gas Financial Analysis**

- Introduction to Excel for Financial Modeling
- Working with Data: Organizing and Analyzing Information
- Statistical Tools for Financial Data Interpretation
- Graphical Representation of Financial and Industry Data
- Normal Distribution and Trend Analysis in Energy Markets
- Introduction to Time Series Analysis for Oil and Gas

## **Day 2: Statistical Analysis for Energy Finance**

- Utilizing Excel for Statistical Calculations
- Key Statistical Metrics: Mean, Median, Standard Deviation, Skewness, and Kurtosis
- Building and Interpreting Scatter Plots, Frequency Distributions, and Histograms
- Regression Analysis and Cost of Equity Estimation
- Analyzing Industry Equity Returns and Financial Performance

## **Day 3: Understanding Oil Product Spreads and Market Analysis**

- Examining Relationships Between Energy Commodities
- Comparative Analysis of Different Data Sets and Their Significance
- Correlation Analysis in Oil Market Pricing
- Establishing Confidence Intervals for Financial Projections
- Application of ANOVA in Market Trend Analysis

## **Day 4: Investment Appraisal Techniques for Oil & Gas**

- Evaluating Energy Investments Using NPV, IRR, and Payback Period
- Excel Functions for Investment Appraisal: IRR, PV, and NPV
- Modified Internal Rate of Return (MIRR) for Enhanced Decision-Making
- Conducting Scenario Analysis and Stress Testing
- Techniques for Predicting Financial Distress in the Energy Sector

## **Day 5: Financial Analysis for Upstream and Downstream Operations**

- Introduction to Oil & Gas Financial Statements
- Ratio Analysis and Performance Benchmarking in the Industry
- Understanding Financial Ratios in a Systematic Framework

- Cash Flow Forecasting and Capital Budgeting Using Excel
- Introduction to Financial Modeling Techniques

## **Module 2: Petroleum Project Economics & Risk Analysis**

### **Day 6: Cash Flow Modeling for Petroleum Projects**

- Key Economic Terminologies and Concepts
- Structuring a Cash Flow Model for Oil & Gas Investments
- Depreciation Methods and Their Impact on Project Valuation
- Handling Inflation and Distinguishing Between Nominal & Real Cash Flows
- Sunk Costs and Their Role in Project Decision-Making
- Introduction to Project Financing in the Oil & Gas Sector

### **Day 7: Economic Indicators for Project Evaluation**

- Defining and Applying Key Economic Indicators
- Present Value and Discount Factor Concepts
- Net Present Value (NPV) and Internal Rate of Return (IRR) Calculations
- Assessing the Impact of Project Delays on Profitability
- Payback Period and Profitability Index Metrics
- Evaluating Incremental Projects for Investment Decisions

### **Day 8: Managing Risks and Uncertainties in Oil & Gas Projects**

- Understanding Risk and Uncertainty in Energy Investments
- Applying the Expected Value Concept to Decision-Making
- Decision Tree Analysis for Oil and Gas Ventures
- Evaluating Farm-out Decisions and Joint Venture Scenarios
- Sensitivity Analysis and Probability-Based Financial Modeling
- Monte Carlo Simulation for Risk Forecasting

### **Day 9: Hands-on Spreadsheet Modeling for Petroleum Economics**

- Introduction to Spreadsheet-Based Economic Calculations
- Constructing a Simple Cash Flow Model in Excel
- Applying Economic Indicators to Petroleum Projects
- Conducting Financial Analysis and Sensitivity Testing
- Interactive Group Discussion on Financial Modeling Strategies

### **Day 10 :Developing an Oil Field Development Economic Model**

- Building an Integrated Economic Model for Oil Field Development
- Conducting Sensitivity Analysis for Investment Decisions
- Application of Russell Field Model for Financial Evaluation
- Reviewing Project Economics and Risk Considerations
- Final Discussion and Course Wrap-Up

## DOCUMENTATION

The **MTC team** has meticulously prepared **high-quality training materials** for distribution to all delegates.

## CERTIFICATES

An **accredited Certificate of Completion** will be awarded to participants who successfully attend and complete the program.

## SCHEDULE

Course sessions are scheduled as follows:

- **Morning Session:** 09:00 AM – 1:00 PM
- **Afternoon Session:** 01:00 PM – 05:00 PM

## REGISTRATION & PAYMENT

To register, please complete the **registration form** available on the course page and submit it with your **preferred payment method**. Alternatively, you can contact us via **email or WhatsApp** for assistance.

## TRAVEL & TRANSPORT

We ensure a **seamless travel experience** by providing **airport-hotel-airport** transfers for all participants.