



## Petroleum Project Economics and Risk Analysis Training

### Description

#### Objectives

- Understand various economic terms used in the oil & gas industry.
- Understand how to develop economic models of various petroleum fiscal regimes.
- Carry out cash flow analysis, different economic analyses for petroleum related project and determine economic indicators.
- Evaluate and quantify risks and uncertainties.
- Make the right investment decision in the presence of risk.
- Carry out a comprehensive economic evaluation study for any petroleum related project including risk analysis and sensitivity study using spreadsheet.
- Contribute to the petroleum project investment within a solid economic system and do a detailed economic evaluation.
- Contribute to the decision making process for any petroleum related project.

#### Programme Outline

##### Cash Flow Analysis

- Familiarization with Economic terms
- Setting up Cash Flow Calculation
- Depreciation Methods
- Loss Carry Forwards
- Inflation
- Nominal & Real Cash Flow
- Sunk Costs
- Project Financing

##### Economic Indicators

- Economic Indicators Definitions
- Present Value Concept

- Discount Factor
- Net Present Value
- Internal Rate of Return
- Effect of Project Delay
- Payback Period
- Profit/Investment Ratio
- Incremental Projects

## **Risks and Uncertainties**

- Risk & Uncertainty
- Expected Value Concept
- Decision Tree Analysis
- Farm-out Decision
- Probability Analysis
- Sensitivity Analysis
- Probability Distribution
- Monte Carlo Simulation

## **Setting up Spreadsheet Calculation**

- Introduction to Spreadsheet Calculation
- Simple Cash Flow Using Excel
- NPV calculations
- Application of economic indicators

## **Setting up Oil Field Development Model**

- Group activities
- Setting up an Integrated Economic Model of a Typical Oil Field Development
- Project Sensitivity Analysis for the selected model
- Introduction to Russell field model
- Final remarks