Training Course on Financial Modelling in the Oil and Gas Industry

Professional Development Training Course Outline

Category	Oil and Gas	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The **oil and gas industry** is characterized by significant capital investments, long project lifecycles, volatile commodity prices, and complex regulatory frameworks. Effective **financial modelling** is crucial for navigating these challenges, supporting strategic decision-making, optimizing investments, and managing inherent risks. This comprehensive training course is designed to equip professionals with the advanced skills and knowledge necessary to build robust and insightful financial models specifically tailored for the unique dynamics of the oil and gas sector. Participants will gain expertise in forecasting, valuation, risk analysis, and scenario planning, enabling them to contribute significantly to their organizations' financial success and strategic objectives within this demanding industry.

This intensive program goes beyond basic spreadsheet skills, focusing on the specific nuances of **oil and gas finance**. It delves into industry-specific metrics, valuation techniques like Net Asset Value (NAV), and the impact of production profiles and reserve estimates on financial projections. Through practical exercises and real-world case studies, participants will learn to construct integrated financial models, conduct sensitivity analysis to assess the impact of fluctuating **commodity prices**, and apply various **valuation methods** to evaluate oil and gas assets and projects. By mastering these essential **financial modelling techniques**, attendees will enhance their ability to analyze investment opportunities, manage financial risks, and provide valuable insights for strategic planning and **capital budgeting** within the **energy sector**.

Programme Curriculum

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Course Duration

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Course Objectives

1. **Master Oil & Gas Financial Modelling Techniques**: Develop in-depth understanding of industry-specific financial modelling methodologies.
2. **Build Integrated Financial Statements for Energy Companies**: Learn to construct comprehensive income statements, balance sheets, and cash flow statements tailored for oil and gas businesses.
3. **Perform Advanced Valuation of Oil & Gas Assets**: Gain proficiency in applying key valuation methods such as Discounted Cash Flow (DCF) and Net Asset Value (NAV) relevant to the energy sector.
4. **Analyze the Impact of Commodity Price Volatility**: Understand and model the effects of fluctuating oil and gas prices on financial forecasts and valuations.
5. **Incorporate Production Forecasting into Financial Models**: Learn to integrate reserve estimates, production profiles, and decline curve analysis into financial projections.
6. **Evaluate Project Economics in the Upstream Sector**: Develop skills in assessing the financial viability of exploration and production (E&P) projects.
7. **Model Midstream and Downstream Operations**: Understand the financial modelling considerations for transportation, refining, and marketing segments of the oil and gas value chain.
8. **Conduct Sensitivity and Scenario Analysis for Risk Management**: Learn to identify key risk factors and assess their potential impact on financial outcomes through various analytical techniques.
9. **Apply Capital Budgeting Techniques in the Energy Industry**: Master methods for evaluating and prioritizing long-term investments in oil and gas projects.
10. **Utilize Advanced Excel Functions for Financial Modelling**: Enhance proficiency in using Excel tools and functions essential for building complex oil and gas financial models.
11. **Understand Fiscal Regimes and Production Sharing Agreements**: Learn how to incorporate the impact of royalties, taxes, and other contractual terms into financial models.
12. **Forecast Financial Performance under Geopolitical and Regulatory Uncertainty**: Develop the ability to model the influence of external factors on oil and gas finances.

13. **Communicate Financial Insights Effectively to Stakeholders**: Improve skills in presenting financial model outputs and recommendations to management and investors.

Organizational Benefits

- **Improved Decision-Making**: Equipping employees with strong financial modelling skills leads to more informed and strategic investment decisions.
- **Enhanced Risk Management**: Better understanding and quantification of financial risks associated with oil and gas projects and market volatility.
- **Optimized Capital Allocation**: More effective evaluation and prioritization of capital expenditures, maximizing returns on investment.
- **Increased Efficiency in Financial Planning**: Streamlined processes for budgeting, forecasting, and financial analysis.
- **Stronger Negotiation Capabilities**: Improved understanding of project economics and valuation enhances the ability to negotiate favorable terms in agreements and transactions.
- **Better Stakeholder Communication**: Clearer and more data-driven communication of financial performance and projections to investors and other stakeholders.
- **Competitive Advantage**: Organizations with skilled financial modelling teams can better navigate the complexities of the oil and gas market.
- **Attracting and Retaining Talent**: Investing in employee development in critical areas like financial modelling can attract and retain top talent.

Target Audience

1. **Financial Analysts** working in oil and gas companies.
2. **Investment Bankers** specializing in the energy sector.
3. **Project Managers** involved in oil and gas developments.
4. **Engineers** requiring a strong understanding of project economics.
5. **Energy Consultants** providing financial advisory services.
6. **Corporate Finance Professionals** in the oil and gas industry.
7. **Budgeting and Planning Managers** within energy organizations.
8. **Decision-Makers and Executives** seeking a deeper understanding of financial implications.

Course Outline

Module 1: Introduction to Financial Modelling in Oil & Gas

- Overview of the oil and gas industry value chain (upstream, midstream, downstream).
- Importance of financial modelling in the energy sector for decision-making.
- Key characteristics and challenges of financial modelling in oil and gas.
- Understanding industry-specific terminology and metrics.
- Setting up the foundation for building robust financial models.

Module 2: Excel Fundamentals for Oil & Gas Financial Models

- Advanced Excel functions and formulas relevant to financial modelling.
- Best practices for structuring and organizing financial models in Excel.
- Utilizing data tables, scenario manager, and goal seek for analysis.
- Creating dynamic charts and graphs for effective data visualization.
- Techniques for auditing and error-proofing financial models.

Module 3: Building Integrated Financial Statements for Energy Companies

- Developing a comprehensive income statement tailored for oil and gas operations.

- Constructing a detailed balance sheet reflecting industry-specific assets and liabilities.
- Creating a robust cash flow statement, including operating, investing, and financing activities.
- Ensuring the three financial statements are dynamically linked.
- Understanding key financial ratios and their interpretation in the oil and gas context.

Module 4: Revenue Modelling in the Upstream Sector

- Understanding different types of oil and gas reserves (proven, probable, possible).
- Incorporating production profiles and decline curve analysis into revenue forecasts.
- Modelling the impact of production sharing agreements and royalties.
- Forecasting revenue based on various commodity price scenarios.
- Analyzing the sensitivity of revenue to production volumes and prices.

Module 5: Cost Modelling in the Upstream Sector

- Categorizing and forecasting operating expenses (OPEX) in E&P activities.
- Modelling capital expenditures (CAPEX) for exploration, development, and production.
- Accounting for depreciation, depletion, and amortization of oil and gas assets.
- Incorporating decommissioning and abandonment costs into financial projections.
- Analyzing cost structures and identifying key cost drivers.

Module 6: Financial Modelling for Midstream Operations

- Understanding the financial drivers of transportation (pipelines) and storage.
- Modelling tariff structures and throughput volumes for midstream assets.
- Forecasting operating costs and capital investments in midstream infrastructure.
- Analyzing the profitability and valuation of midstream companies.
- Considering regulatory aspects and their impact on midstream financials.

Module 7: Financial Modelling for Downstream Operations

- Modelling refining margins and product yields in the downstream sector.
- Forecasting sales volumes and pricing for refined products.
- Analyzing the cost of crude oil and other input materials.
- Modelling marketing and distribution expenses.
- Evaluating the financial performance of downstream companies.

Module 8: Commodity Price Forecasting and Risk Management

- Understanding the factors influencing oil and gas prices (supply, demand, geopolitics).
- Exploring different methods for commodity price forecasting (technical, fundamental).
- Incorporating price volatility into financial models through sensitivity analysis.
- Analyzing the use of hedging instruments to mitigate price risk.
- Modelling the financial impact of different hedging strategies.

Module 9: Project Finance Modelling in Oil & Gas

- Structuring project finance models for large-scale oil and gas developments.
- Incorporating debt financing, equity contributions, and other funding sources.
- Modelling debt service, covenants, and repayment schedules.
- Analyzing project returns using metrics like NPV, IRR, and payback period.
- Assessing project risks and incorporating mitigation strategies into the model.

Module 10: Valuation Techniques for Oil & Gas Assets and Companies

- Applying the Discounted Cash Flow (DCF) method for valuing oil and gas entities.
- Understanding and building Net Asset Value (NAV) models for E&P companies.
- Utilizing comparable company analysis (CCA) and precedent transactions for valuation.
- Incorporating risk adjustments and discount rates specific to the oil and gas industry.
- Reconciling different valuation approaches to arrive at a robust value estimate.

Module 11: Capital Budgeting and Investment Decisions in Energy

- Applying various capital budgeting techniques (NPV, IRR, Payback, Profitability Index).
- Evaluating investment opportunities in exploration, production, and infrastructure projects.
- Considering the impact of taxes and fiscal regimes on investment decisions.
- Performing break-even analysis and assessing project viability under different scenarios.
- Incorporating strategic considerations into the capital budgeting process.

Module 12: Risk Analysis and Sensitivity Modelling

- Identifying key financial and operational risks in oil and gas projects.
- Conducting sensitivity analysis to assess the impact of changes in key variables.
- Developing scenario analysis to evaluate performance under different market conditions.
- Using tornado diagrams and spider charts to visualize sensitivity results.
- Incorporating risk mitigation strategies into financial models.

Module 13: Fiscal Regimes and Production Sharing Agreements

- Understanding different types of fiscal regimes in the oil and gas industry (concessions, production sharing contracts).
- Modelling the impact of royalties, taxes, and other government takes on project economics.
- Analyzing the financial implications of different contractual terms.
- Incorporating fiscal terms into financial models.
- Evaluating the profitability of projects under various fiscal scenarios.

Module 14: Advanced Modelling Techniques and Best Practices

- Building dynamic and flexible financial models using best practices.
- Incorporating circular references and iterative calculations.
- Using macros and VBA for model automation (optional).
- Documenting model assumptions and outputs clearly.
- Ensuring model transparency and auditability.

Module 15: Communicating Financial Model Outputs and Insights

- Presenting financial model results effectively to different stakeholders.
- Creating clear and concise reports and presentations.
- Highlighting key assumptions, sensitivities, and conclusions.
- Using data visualization techniques to communicate insights.
- Facilitating discussions and answering questions related to the financial model.

Training Methodology

This training course will employ a blended learning approach, combining:

- **Interactive Lectures**: Providing a strong theoretical foundation and industry context.
- **Practical Demonstrations**: Showing step-by-step how to build financial models in Excel.
- **Hands-on Exercises**: Allowing participants to apply learned concepts and build their own model components.

- **Real-World Case Studies**: Analyzing actual oil and gas projects and company financials.
- **Group Discussions**: Encouraging peer learning and the sharing of industry experiences.
- **Q&A Sessions**: Providing opportunities for participants to address specific queries.
- **Templates and Resources**: Providing participants with model templates and supplementary materials for future use.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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