Training Course on Economic Modeling and Valuation for Oil and Gas Assets

Professional Development Training Course Outline

Category	Oil and Gas	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's volatile energy markets, mastering economic modeling and valuation techniques is essential for professionals in the oil and gas (O&G) industry. Training Course on Economic Modeling & Valuation for Oil & Gas Assets equips participants with hands-on skills and strategic tools to evaluate upstream, midstream, and downstream oil & gas assets using globally recognized methodologies and financial modeling best practices. The course integrates real-world scenarios, data-driven decision-making, and project valuation strategies to ensure participants can build robust and dynamic economic models applicable to both greenfield and brownfield developments.

With the integration of discounted cash flow (DCF) models, net present value (NPV) analysis, risk-adjusted returns, and sensitivity analysis, participants will walk away with actionable expertise for project appraisal, asset acquisition, and performance benchmarking. This course is tailored to align with current market trends such as energy transition, ESG valuation, and digital transformation in asset modeling, making it a cutting-edge learning experience for financial analysts, engineers, managers, and executives in the energy sector.

Programme Curriculum

Training Course on Economic Modeling & Valuation for Oil & Gas (O&G) Assets

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Course Objectives

1. Understand oil and gas project lifecycle economics from exploration to decommissioning.
2. Apply discounted cash flow (DCF) techniques for asset valuation.
3. Analyze net present value (NPV), IRR, and payback period for upstream investments.
4. Construct economic models for oil & gas reserves using Excel and simulation tools.
5. Integrate price forecasts, inflation, and exchange rate risks into models.
6. Conduct sensitivity and scenario analysis for capital-intensive projects.
7. Evaluate fiscal regimes and petroleum contracts including PSCs and royalty systems.
8. Quantify economic indicators for risk-adjusted decision-making.
9. Apply Monte Carlo simulation for uncertainty modeling.
10. Assess real options valuation in strategic decision-making.
11. Incorporate environmental, social & governance (ESG) criteria in asset valuation.
12. Design valuation dashboards using Excel and Power BI for decision support.
13. Interpret market comparables, precedent transactions, and NAV models for M&A.

Target Audiences

1. Financial Analysts in Energy
2. Petroleum Economists
3. Reservoir and Production Engineers
4. Strategic Planners and Business Analysts
5. Government & Regulatory Officers
6. Asset Managers and Investment Professionals
7. Project Finance Experts
8. M&A and Corporate Strategy Advisors

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Economic Modeling in O&G

- Overview of petroleum industry value chain

- Key economic metrics: NPV, IRR, ROI, PI
- Data inputs: reserves, production forecasts, CAPEX/OPEX
- Time value of money and discounting
- Excel-based model structure setup
- **Case Study: Modeling the economics of a marginal offshore field**

Module 2: Discounted Cash Flow & Valuation Methods

- DCF fundamentals applied to O&G assets
- Free cash flow estimation techniques
- Terminal value and salvage value modeling
- Depreciation, taxes, and abandonment cost treatment
- Comparing NPV vs IRR vs EMV
- **Case Study: Valuation of a shale gas field in North America**

Module 3: Fiscal Regimes & Government Take

- Royalty, tax, and profit-sharing mechanisms
- Production Sharing Contracts (PSCs) explained
- Sliding scale systems and ring-fencing
- Fiscal breakeven and sensitivity
- Government take and investor netbacks
- **Case Study: Analysis of Nigeria vs Norway fiscal regimes**

Module 4: Price Forecasting, Inflation & FX Risk

- Oil price modeling techniques
- Use of forward curves and futures data
- Managing inflation in long-term models
- FX translation risk and local content effects
- Pricing differentials and transport cost modeling
- **Case Study: Cash flow stress testing under oil price volatility**

Module 5: Sensitivity, Scenario & Risk Analysis

- Tornado charts and spider diagrams
- Multi-variable sensitivity analysis
- P10/P50/P90 scenario building
- Decision trees and probability-weighted outcomes
- Evaluating project robustness under uncertainty
- **Case Study: Risk-adjusted valuation of a frontier exploration asset**

Module 6: Real Options & Strategic Valuation

- Concept and application of real options
- Types: defer, abandon, expand, contract
- Binomial tree and Black-Scholes applications

- Strategic fit and managerial flexibility
- Integration with base economic models
- **Case Study: Real options analysis for phased field development**

Module 7: ESG Metrics & Sustainable Valuation

- ESG risks and opportunity mapping
- Emissions accounting and carbon pricing
- Social license to operate and reputational risk
- Incorporating ESG scores into asset valuation
- Transition risk modeling and stranded assets
- **Case Study: Evaluating carbon impact of a mature gas asset**

Module 8: Integrated Modeling & Valuation Dashboard

- Linking financial, technical, and market data
- Excel macros and automation
- Scenario toggles and real-time visualization
- Power BI dashboards for stakeholders
- Model audit and quality assurance
- **Case Study: Executive dashboard for midstream pipeline valuation**

Training Methodology

- Hands-on Excel-based modeling exercises
- Real-life case studies from global oil & gas projects
- Group workshops and guided model building
- Interactive quizzes and live simulations
- Industry expert facilitation and feedback
- Downloadable tools and post-training support

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. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com