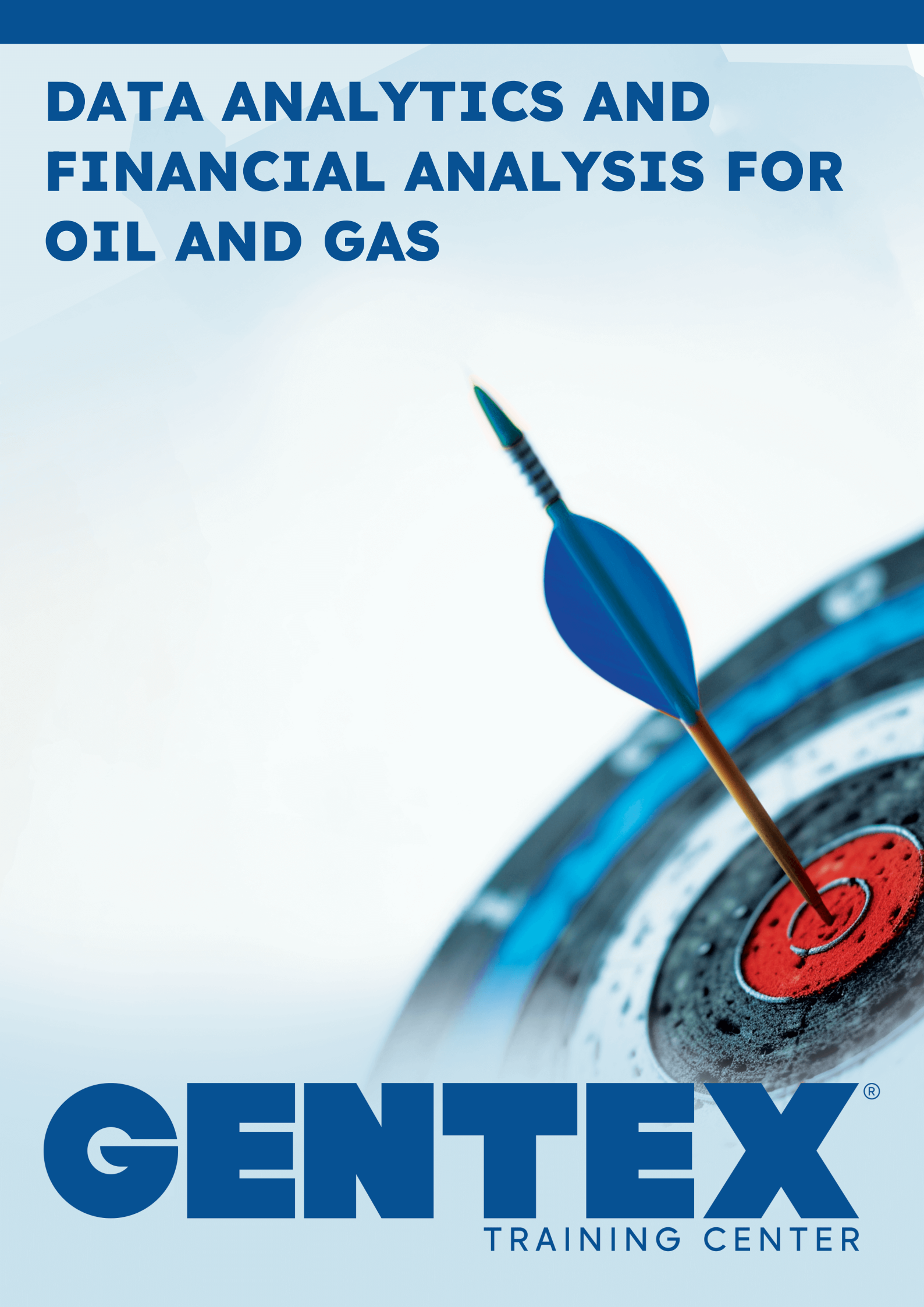
DATA ANALYTICS AND FINANCIAL ANALYSIS FOR OIL AND GAS



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TRAINING CENTER

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Introduction

Data Analytics and Financial Analysis for Oil and Gas Training Course builds the analytical capability that finance professionals, analysts, and planners need to interpret oil and gas performance with data rather than intuition. The sector produces enormous volumes of operational, cost, and market data. Turning that data into decisions requires financial models that respect commodity price cycles, production profiles, and capital intensity. Weak analysis there produces unreliable forecasts, mispriced projects, and slow responses to cost overruns. This course develops the analytical discipline that prevents those outcomes. It covers data preparation, financial modelling, and profitability analysis. Furthermore, it applies cost analysis, variance reporting, and forecasting. In addition, it develops dashboards, visualisation, and decision reporting. As a result, participants analyse oil and gas financials with confidence.

Data Analytics and Financial Analysis for Oil and Gas Course Objectives

- Explain oil and gas value chain economics and financial drivers.
- Prepare, clean, and structure operational and financial data.
- Build financial models for upstream, midstream, and downstream assets.
- Apply field economics using NPV, IRR, and payback analysis.
- Analyse lifting cost, finding cost, and unit cost per barrel.
- Apply variance analysis to production, cost, and revenue data.
- Forecast revenue, cost, and cash flow under price scenarios.
- Build dashboards and visualisations for decision reporting.
- Apply sensitivity and scenario analysis to project economics.
- Support investment decisions with data-driven analysis.

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Course Methodology

- Interactive lectures with real oil and gas financial cases.
- Data preparation and modelling workshops.
- Field economics and profitability analysis exercises.
- Forecasting, scenario, and dashboard practice.
- Structured peer review with facilitator feedback on analytical models.

Who Should Take This Course

- Financial analysts in oil and gas companies.
- Planning and economics professionals.
- Cost controllers and management accountants.
- Commercial and business development analysts.
- Data analysts supporting finance functions.
- Auditors and consultants in the energy sector.

Data Analytics and Financial Analysis for Oil and Gas Course Outlines

Day 1: Oil and Gas Economics and Data Foundations

- Value chain economics across upstream, midstream, and downstream.
- Revenue drivers: production, price, and product mix.
- Cost drivers: lifting cost, finding cost, and unit cost per barrel.
- Financial reporting structures and cost centres in oil and gas.
- Data sources: production reports, cost ledgers, and market prices.

- Data cleaning, validation, and structuring techniques.
- Case study: mapping the financial drivers of an asset.

Day 2: Financial Modelling for Oil and Gas Assets

- Model structure and assumption design.
- Production profile and decline curve inputs.
- Revenue modelling with price and product differentials.
- Operating and capital expenditure modelling.
- Royalty, tax, and production sharing contract treatment.
- Cash flow construction and free cash flow derivation.
- Workshop: building an asset-level financial model.

Day 3: Profitability and Cost Analysis

- Field economics using NPV, IRR, and payback period.
- Unit cost analysis: cost per barrel and per BOE.
- Lifting cost and finding cost benchmarking.
- Contribution and break-even analysis under price scenarios.
- Profitability analysis by field, asset, and product line.
- Cost variance analysis for operations and projects.
- Workshop: evaluating field profitability and cost performance.

Day 4: Forecasting and Scenario Analysis

- Revenue and cost forecasting under price scenarios.
- Price deck design and commodity price sensitivity.
- Production forecasting and variance to plan.

- Scenario modelling: base, upside, and downside cases.
- Sensitivity analysis with tornado charts and data tables.
- Rolling forecasts and budget revision routines.
- Workshop: building a scenario model for a portfolio of assets.

Day 5: Dashboards, Visualisation, and Decision Reporting

- Dashboard design for finance and operations reporting.
- Data visualisation principles and chart selection.
- KPI selection: unit cost, margin, and capital efficiency metrics.
- Building management reporting packs and executive summaries.
- Data governance, accuracy checks, and audit trails.
- Communicating analytical findings to decision makers.
- Course review, assessment, and action planning.

Conclusion

By successfully completing Data Analytics and Financial Analysis for Oil and Gas, participants will gain a thorough understanding of oil and gas economics and data foundations, financial modelling for assets, profitability and cost analysis, forecasting and scenario analysis, and dashboards, visualisation and decision reporting. They will also acquire practical skills in oil and gas data preparation and structuring, asset-level financial modelling, profitability and cost analysis, and forecasting, scenario analysis and decision reporting. In addition, the course prepares them to turn sector data into defensible financial decisions. Gentex Training Center delivers this programme with a strong focus on applied energy analytics and decision-ready reporting.

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FAQs for Data Analytics and Financial Analysis for Oil and Gas course

Q1 What is the "Data Analytics and Financial Analysis for Oil and Gas" course about?

It is a five-day programme on turning oil and gas data into financial decisions. It covers value chain economics and data foundations, asset-level financial modelling, profitability and cost analysis, forecasting and scenario analysis, and dashboards and decision reporting.

Q2 What are the key benefits of the "Data Analytics and Financial Analysis for Oil and Gas" course?

Participants analyse sector performance with stronger data and models. The course improves data preparation and validation, sharpens asset financial modelling and unit cost analysis, strengthens field economics and profitability assessment, improves price scenario and sensitivity work, and raises dashboard and decision reporting quality.

Q3 What skills will I gain from the "Data Analytics and Financial Analysis for Oil and Gas" course?

Participants gain oil and gas data preparation and structuring, asset-level financial modelling, profitability and cost analysis, and forecasting, scenario analysis and decision reporting. These four skills cover the practical core of energy financial analytics.

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Q4 What tools, methods, or standards are covered in the "Data Analytics and Financial Analysis for Oil and Gas" course?

The course covers value chain economics across upstream, midstream and downstream, revenue and cost driver analysis, lifting cost, finding cost and unit cost per barrel, cost centre and reporting structure design, data cleaning and validation techniques, production profile and decline curve modelling, price and product differential modelling, operating and capital expenditure modelling, royalty, tax and production sharing contract treatment, free cash flow derivation, field economics using NPV, IRR and payback period, contribution and break-even analysis, profitability analysis by field and product line, cost variance analysis, price deck design, commodity price sensitivity, scenario modelling for base, upside and downside cases, tornado chart and data table sensitivity analysis, rolling forecasts, dashboard design, data visualisation principles, KPI selection including capital efficiency metrics, management reporting pack construction, data governance and accuracy checks, and audit trail documentation.

Q5 How is the "Data Analytics and Financial Analysis for Oil and Gas" course applied in real-world practice?

Participants apply the methods to real and simulated oil and gas datasets. They clean and structure production and cost data, build asset-level financial models, model production profiles and price differentials, apply production sharing contract terms, calculate NPV and IRR for field economics, compute unit cost per barrel, analyse cost variances, build price scenarios and sensitivity tables, construct rolling forecasts, design KPIs and dashboards, and prepare executive reporting packs. Many leave with an asset financial model template, a unit cost analysis workbook, and a dashboard structure ready to use.

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