OIL AND GAS FINANCIAL MODELING



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TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
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Introduction

Oil and Gas Financial Modeling Training Course builds the spreadsheet skills that energy professionals need to model assets, budgets and investment proposals. Participants learn how to translate production profiles, cost structures and fiscal terms into reliable financial models. The programme covers model design, production forecasting, revenue and cost build-up, fiscal calculations, discounted cash flow valuation, debt sizing and scenario analysis. Furthermore, it stresses model integrity, error checks and documentation so results survive review. As a result, delegates can build a model from a blank sheet and challenge the ones they inherit. Gentex Training Center delivers the programme through live Excel workshops across the five days.

Oil and Gas Financial Modeling Course Objectives

- Design clean Excel models with separated inputs, calculations and outputs.
- Build production forecasts using decline curves and plateau profiles.
- Model revenue, operating costs, capital expenditure and free cash flow.
- Apply fiscal terms including royalty, tax and production sharing contracts.
- Value assets using NPV, IRR, XIRR and MIRR functions.
- Model debt sizing, coverage ratios and cash waterfall structures.
- Run sensitivity analysis with data tables and tornado charts.
- Apply scenario management using CHOOSE, INDEX and dropdown controls.
- Build error checks, audit trails and documentation standards.
- Present model outputs through dashboards and executive summaries.

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Course Methodology

The course combines concise briefings with extensive hands-on Excel workshops and guided case work. Participants build live models on their own laptops, then review and correct them using structured checks. In addition, structured peer review reinforces good practice, and every day closes with a practical modelling exercise drawn from oil and gas projects.

Who Should Take This Course

- Financial analysts and modelling specialists in energy companies.
- Petroleum and development engineers involved in project evaluation.
- Planning, business development and commercial staff in oil and gas firms.
- Accountants, controllers and auditors working with energy assets.
- Investment analysts, bankers and advisers covering the energy sector.
- Project managers and economists responsible for capital budgeting.

Oil and Gas Financial Modeling Course Outlines

Day 1: Model Design and Industry Fundamentals

- Best-practice Excel model structure: inputs, calculations, outputs and navigation.
- Spreadsheet integrity: formula consistency, colour coding and version control.
- The oil and gas value chain from exploration to refining and sales.
- Core terminology: reserves, resources, decline rates and production profiles.
- Cost categories: capital expenditure, operating expenditure and decommissioning.
- Introduction to fiscal regimes and government take.
- Workshop: building a clean, auditable model skeleton.

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Day 2: Production Forecasting and Cash Flow Build

- Forecasting production with decline curves and plateau assumptions.
- Modelling oil, gas and condensate streams with separate price assumptions.
- Building revenue schedules linked to volume, price and quality differentials.
- Operating cost behaviour, escalation and inflation treatment.
- Phasing capital expenditure against the drilling and development schedule.
- Working capital movements and decommissioning provisions.
- Workshop: constructing a ten-year unlevered cash flow forecast.

Day 3: Fiscal Modelling and Valuation Metrics

- Modelling royalty, production sharing contracts and tax ring-fencing.
- Cost oil, profit oil, carried interest and contractor take calculations.
- Time value of money and weighted average cost of capital.
- Net present value, internal rate of return, payback and profitability index.
- Correct use of Excel functions including NPV, IRR, XIRR and MIRR.
- Ranking mutually exclusive projects and setting hurdle rates.
- Workshop: valuing a field development and defending the result.

Day 4: Debt, Risk and Sensitivity Analysis

- Debt sizing techniques: sculpted debt and target coverage approach.
- Debt service coverage ratio and loan life coverage ratio modelling.
- Cash waterfall, debt service reserve and distribution mechanics.
- Building one-way and two-way data tables in Excel.
- Scenario management with CHOOSE, INDEX and dropdown controls.

- Tornado charts and spider diagrams to rank key value drivers.
- Workshop: debt sizing with break-even price analysis.

Day 5: Model Review, Automation and Presentation

- Error checks, formula auditing and circular reference handling.
- Documentation schedules, assumption registers and model handover.
- Automating calculations with structured references and lookups.
- Building a one-page executive summary dashboard from model outputs.
- Auditing another analyst's model and fixing common errors.
- Presenting model results clearly to non-financial audiences.
- Workshop: reviewing, correcting and presenting a full financial model.

Conclusion

By successfully completing Oil and Gas Financial Modeling Training Course, participants will have acquired the practical ability to build, test and interpret financial models for energy assets. They will understand production forecasting, fiscal mechanics, valuation metrics, debt structuring and risk analysis, and they will know how to turn model output into clear recommendations. As a result, delegates support stronger capital decisions. Gentex Training Center builds the programme around current industry practice.

FAQs for the Oil and Gas Financial Modeling course

Q1 What is the "Oil and Gas Financial Modeling" course about?

It teaches how to build Excel models that evaluate oil and gas assets and investments. You learn production forecasting, cost and fiscal modelling, valuation metrics, debt sizing and risk analysis, then apply them to real energy cases in live workshops.

Q2 What are the key benefits of the "Oil and Gas Financial Modeling" course?

You gain faster, more reliable asset evaluation and fewer spreadsheet errors. You can test downside scenarios, compare competing projects consistently, structure debt with evidence, and give management clear, risk-aware recommendations for capital allocation.

Q3 What skills will I gain from the "Oil and Gas Financial Modeling" course?

You will gain financial modelling in Excel, oil and gas production and cash flow forecasting, discounted cash flow valuation and fiscal modelling, and debt sizing, risk and sensitivity analysis.

Q4 What tools, methods, or standards are covered in the "Oil and Gas Financial Modeling" course?

The course covers Microsoft Excel modelling with NPV, IRR, XIRR and MIRR functions, decline curve production forecasting, royalty and production sharing contract fiscal models, debt sizing with sculpted debt and coverage targets, debt service coverage ratio and loan life coverage ratio calculations, cash waterfall structures, one-way and two-way data tables, CHOOSE and INDEX scenario controls, and tornado chart sensitivity analysis.

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Q5 How is the "Oil and Gas Financial Modeling" course applied in real-world practice?

Graduates apply it to build asset valuation models, prepare budgets and long-range plans, size debt for field development, screen exploration prospects, evaluate workovers and infill wells, test model sensitivity to price and cost assumptions, and present modelling results to management and investment committees.