UPSTREAM ECONOMICS AND MANAGEMENT



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Introduction

Upstream Economics and Management Training Course builds the commercial and technical judgement needed to run exploration and production assets profitably. It connects geology and reservoir behaviour with the cash flow that determines whether a field is worth developing. Participants examine reserves classification, drilling economics, lifting costs, and production sharing agreements as one integrated picture. Furthermore, the programme covers portfolio management, capital discipline, and the fiscal terms that vary across host countries. In addition, it addresses operating cost control in mature fields and decommissioning obligations. As a result, attendees can evaluate upstream opportunities with structured financial evidence.

Upstream Economics and Management Course Objectives

- Explain the upstream value chain from exploration through appraisal, development, and production.
- Classify reserves and resources using the SPE Petroleum Resources Management System (PRMS).
- Estimate capital and operating expenditure for drilling, facilities, and production operations.
- Build cash flow models for field development using net present value and internal rate of return.
- Calculate unit technical cost, lifting cost, and break-even oil price.
- Interpret fiscal regimes, including production sharing contracts, concessions, and tax and royalty systems.
- Analyse production sharing agreement terms and contractor entitlement.
- Manage a portfolio of upstream assets using risk and reward screening.
- Apply operating cost control and enhanced oil recovery economics in mature fields.

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- Assess decommissioning liabilities and abandonment cost provisions.

Course Methodology

- Case studies on field development decisions across different fiscal regimes.
- Hands-on Excel modelling of upstream cash flows and fiscal terms.
- Reservoir and production data exercises that link technical output to economics.
- Group work on portfolio screening and capital allocation.
- Structured discussion of contract negotiations and host government terms.

Who Should Take This Course

- Petroleum and reservoir engineers moving into commercial roles.
- Upstream economists and planning analysts.
- Exploration and production asset managers.
- Finance professionals in oil and gas companies.
- Business development and new ventures staff.
- Contracts and fiscal terms specialists.
- Government and regulatory energy advisors.

Upstream Economics and Management Course Outlines

Day 1: The Upstream Value Chain and Reserves

- Exploration, appraisal, development, and production stages.
- Geological and reservoir fundamentals for commercial staff.
- Reserves and resources classification under the SPE PRMS.
- Contingent resources, prospective resources, and uncertainty ranges.

- Production profiles, decline curves, and recovery factors.
- Field life cycle and decision gates.
- Workshop: classifying resources from a field data set.

Day 2: Cost Estimation and Field Development Economics

- Capital expenditure: drilling, facilities, and infrastructure.
- Operating expenditure: lifting cost, maintenance, and logistics.
- Abandonment and decommissioning cost estimation.
- Cash flow modelling and discounting for field development.
- Net present value, internal rate of return, and payback analysis.
- Unit technical cost and break-even oil price calculation.
- Case exercise: screening two development concepts.

Day 3: Fiscal Regimes and Production Sharing Agreements

- Concessionary, production sharing, and service contract systems.
- Royalty, tax, and cost recovery mechanisms.
- Cost oil, profit oil, and contractor entitlement calculation.
- Ring-fencing, carry arrangements, and domestic market obligations.
- Government take versus contractor take analysis.
- Fiscal stability clauses and changing terms.
- Workshop: modelling contractor cash flow under a production sharing contract.

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Day 4: Portfolio Management and Capital Discipline

- Asset portfolio screening and ranking methods.
- Risk and reward assessment for exploration prospects.
- Expected monetary value and probability of success.
- Capital allocation under budget constraints.
- Marginal field development and incremental project economics.
- Enhanced oil recovery and infill drilling appraisal.
- Case study: building a three-year upstream capital plan.

Day 5: Operations, Cost Control, and Performance

- Operating cost benchmarking and cost per barrel analysis.
- Production optimisation and downtime management.
- Supply chain and service contract management in upstream.
- Performance metrics: production efficiency, reserve replacement ratio, and finding cost.
- Petroleum economics under price volatility and hedging.
- Health, safety, and environmental cost implications.
- Capstone: presenting an asset performance improvement plan.

Conclusion

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By successfully completing Upstream Economics and Management Training Course, participants will gain a connected understanding of upstream value creation, fiscal terms, and asset performance. They will acquire the ability to model field economics, evaluate production sharing contracts, screen portfolios, and control lifting costs. As a result, they can support investment and operating decisions with sound commercial analysis. Gentex Training Center delivers this programme with a strong focus on applied models and real field cases.

FAQs for the Upstream Economics and Management course

Q1 What is the "Upstream Economics and Management" course about?

It covers the commercial side of exploration and production, linking reservoir and production data to cash flow, reserves classification, cost estimation, fiscal regimes, production sharing agreements, portfolio screening, and operating cost control.

Q2 What are the key benefits of the "Upstream Economics and Management" course?

Participants evaluate field developments with structured models, interpret fiscal terms confidently, and identify which assets deserve capital. They also improve cost control and performance measurement in producing assets, which directly affects profitability.

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Q3 What skills will I gain from the "Upstream Economics and Management" course?

Upstream value chain and reserves classification using the SPE PRMS; field development economic modelling with net present value and internal rate of return; fiscal regime and production sharing contract analysis; and portfolio screening, capital allocation, and operating cost control.

Q4 What tools, methods, or standards are covered in the "Upstream Economics and Management" course?

The course covers the SPE Petroleum Resources Management System, cash flow modelling, net present value, internal rate of return, payback analysis, unit technical cost, lifting cost, break-even oil price, expected monetary value, production sharing contract mechanics including cost oil and profit oil, government take analysis, decline curve analysis, and reserve replacement ratio and finding cost metrics.

Q5 How is the "Upstream Economics and Management" course applied in real-world practice?

Participants classify resources from a field data set, screen two development concepts economically, model contractor cash flow under a production sharing contract, build a three-year capital plan, and present an asset improvement plan. These mirror the work of upstream planning and asset teams.