



International Petroleum Management



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Introduction:

Oil and gas are considered among the world's most critical resources and therefore play a pivotal role in driving the global economy. The exploration, production, refining, and distribution of oil and gas involve the most complex and capital-intensive processes and require state-of-the-art technology. This course has been designed to enable participants to learn more about oil & gas production technologies, the chemistry of petroleum and the refining processes, the oil & gas exports and imports business, and best business practices.

The international petroleum management training course will provide a more efficient understanding of the international oil and gas business value chain

Targeted Groups:

- Corporate Planners
- Senior oil and gas managers
- Earth scientists and engineers
- Investment bankers and Fund managers
- Investment analysts
- Media analysts and commentators
- Government agencies - Regulators
- Anyone requiring a broad understanding of the structure, operations, and economics of the oil and gas industries

Course Objectives:

At the end of this course the participants will be able to:

- Have an understanding of the ways the oil & gas and energy industries have organized to operate effectively and efficiently
- Recognize the latest Game-changing technologies - seismic, well logging, horizontal drilling, fracking, gas to liquid, etc.
- Distinguish the renewable sources of energy and the future trends in Solar, Wind, Wave, Hydro, Geothermal, Nuclear, and the methodology to compare the costs of energy of each source
- Understand the benefits of integrating refineries with petrochemicals
- Gain an understanding of the ways the oil and gas industries have organized to operate effectively and efficiently

Targeted Competencies:

- The critical success factors of oil & gas operations - Seismic, wireline services, drilling, fracturing, well completion, production and processing for export
- Recoveries through the primary, secondary and enhanced oil recovery techniques
- Shale oil and gas production potential in different regions of the world.
- Renewable energy sources and their comparative costs
- Energy economics, project evaluation, and decision-making skills
- Crude oil and gas supply, transportation, marketing, trading and storage

Course Content:

Unit 1: Sources, Origin, and Nature of Petroleum:

- Industry overview
- Chemistry of fossil fuels
- Origins of hydrocarbon deposits
- Basic petroleum geology
- Exploration methods & activities

Unit 2: Well Evaluations & Drilling Operations & Reservoir Management:

- Types of wells
- Well Evaluations
- Drilling Operations
- Well Completions
- Oil & Gas Reserve Estimates
- Volumetric Calculations - Original Oil & Gas In-Place
- Reservoir Depletion Mechanisms
- Declining Curve Analyses

Unit 3: Conventional & Unconventional Production:

- Unconventional oil & gas
- Shale Oil & Gas, Tight Gas, and Heavy Oil Recovery
- Oil recovery methods
- Primary, Secondary and Tertiary
- Enhanced Oil Recovery Techniques
- Reservoir Management - maximize the ultimate recovery of oil

Unit 4: New Oil & Gas Field Development and Economic Evaluation:

- Typical Decision Yardsticks
- Petroleum Economics Analysis:
- Net Present Value
- Internal Rate of Return
- Profitability Index
- Unit Tech Cost
- Economic Limit

Unit 5: Oil & Gas Contracts & Joint Ventures:

- Need for collaboration between parties - NOC's and IOC's
- Alignment of interests
- Oil & Gas Contracts
- Types of Contracts
- Concession agreements
- Production Sharing Agreement/Contract PSA/PSC
- Technical Service Contract/Agreement TSA
- Joint Venture and Service agreements

Unit 6: Petroleum Fiscal Regimes:

- Comparison of fiscal regimes
- Auction theory and methods
- Similarities among fiscal systems
- Accounting aspects of fiscal systems
- Division of revenues and profits
- Concession
- Concession rentals
- Unitisation agreements
- Royalties
- Profit tax
- Corporate tax
- Ring-fencing
- State participation
- Signature bonus
- Production bonus
- Bidding for leases

Unit 7: The Chemistry of Petroleum and the Refining Processes:

- Crude and Product Quality
- Crude oil refining operations
- Crude Oil Fractions
- Crude Oil Refinery Products & Processes
- Refinery configurations - separation, conversion and treatment
- Refining Complexity
- Pipelines
- Storage
- Treatment & Blending
- Utilities

Unit 8: Refining Economics - Environmental Aspects:

- Refinery economics
- Benefits of Integrating with Petrochemicals
- Global oil reserves, production & trade movements
- Crude Oil and Refining gross product worth GPW
- Freight
- Netback and Refining Margin
- Vessel chartering
- Environmental aspects

Unit 9: Oil & Gas Exports and Imports Business:

- Organization of Petroleum Exporting Companies OPEC
- Other international and multi-national organizations
- International Energy Agency IEA
- Oil Markets - Crude pricing regimes
- Transportation Logistics - Pipelines, Terminals and Storage
- Crude Oil Tankers
- World's Major Pipelines
- World's Major Terminals, Refineries
- Transportation Logistics - Losses
- Bottlenecks and Chokepoints

Unit 10: Pricing, Trading, Markets, Risk Management:

- Crude oil Benchmarks
- Crude price assessment
- Oil Trading
- Total Barrel Economics
- Oil Markets - Futures
- Exposure - Price
- Hedging - risk management
- Pricing Management Considerations
- Derivatives