



## **Crude Oil Refining, Trading, Pricing & Risk Management Essentials**



**AGILE LEADERS**  
Training Center



# **Crude Oil Refining, Trading, Pricing & Risk Management Essentials**

## **Course Overview:**

The "Crude Oil Refining, Trading, Pricing & Risk Management Training Course" offers a deep, strategic understanding of the full petroleum value chain. Designed for professionals navigating the complex landscape of crude oil, this course covers key sectors: refining technologies, global pricing structures, physical and paper oil markets, trading logistics, and advanced risk mitigation. Through real-world case studies and regulatory frameworks, participants will gain practical insights into benchmark systems like WTI, Brent, and Dubai, contract structures involving INCOTERMS, pipeline and shipping logistics, and price volatility drivers. It integrates vital topics such as hydrocracking, sulfur reduction, market structures like contango/backwardation, crack spreads, swaps, options, and futures in oil trading. By mastering total barrel economics, refining profitability analysis, and OPEC vs. non-OPEC strategies, attendees will leave with a robust command of price risk management, trading legalities, and global energy sector financial exposure. This course emphasizes applied knowledge over theory, equipping learners with tools and best practices critical for success in high-stakes energy trading and operations.

## **Target Audience:**

- Crude oil traders and commodity analysts
- Petroleum economists and energy risk managers
- Refinery planners and operations managers
- Energy legal and compliance officers
- Chartering and logistics coordinators
- Oil sales, contract, and procurement specialists

## **Targeted Organizational Departments:**

- Oil Trading and Risk Management
- Refining and Downstream Operations
- Contract and Legal Compliance
- Pricing and Market Analytics
- Chartering and Marine Logistics
- Corporate Strategy and Investment Planning

## Targeted Industries:

- Oil & Gas exploration and production companies
- Petroleum refining and distribution firms
- Trading houses and commodity investment firms
- Energy logistics and shipping companies
- Financial institutions dealing in energy derivatives
- National oil companies and regulators

## Course Offerings:

By the end of this course, participants will be able to:

- Evaluate international oil benchmarks and pricing systems WTI, Brent, Dubai
- Apply hedging techniques using options, swaps, and futures
- Assess crude oil refining configurations and yields
- Interpret global oil contracts, INCOTERMS, and legal risks
- Analyze physical and paper oil markets and manage volatility
- Understand sulfur reduction technologies and environmental economics
- Manage downstream logistics, supply chains, and transfer pricing
- Navigate total barrel economics and refining profitability models

## Training Methodology:

This training course combines expert-led instruction with hands-on activities to ensure deep engagement and application of skills. Methods include:

- Interactive lectures with real-time market data analysis
  - Case studies on price volatility, OPEC decisions, and refinery economics
  - Group work for contract review, margin calculation, and benchmarking
  - Role-playing scenarios for charter party negotiation and legal dispute resolution
  - Simulation-based exercises in futures/options trading and risk exposure
  - Discussion sessions on energy sector regulations and financial strategy
- This multifaceted approach ensures participants apply learning to current oil market realities, balancing theory with direct industry relevance.

## Course Toolbox:

- Templates for refinery margin calculations and supply cost analysis
- Charts of benchmark pricing and market structures
- Sample INCOTERM clauses and contract risk maps
- Access to current price data illustrative only
- Practical insights into software/tools used in real energy operations no software provided

## Course Agenda:



## **Day 1: Global Oil Pricing Systems & Market Fundamentals**

- **Topic 1:** The Evolution of International Oil Pricing Systems
- **Topic 2:** Crude Oil Benchmarks: WTI, Brent, Dubai, ASCI, OPEC Basket
- **Topic 3:** Pricing Differentials: Absolute, Time, Grade, Location
- **Topic 4:** Oil Price Setting Mechanisms & Price Reporting Agencies
- **Topic 5:** Historical & Real Oil Price Trends and Volatility Drivers
- **Topic 6:** Marker Crudes, Regional Pricing, and Crude Classification
- **Reflection & Review:** Benchmark Selection & Pricing Drill

## **Day 2: Physical Markets, Trading & Transportation**

- **Topic 1:** Introductory Concepts in Oil Trading & Market Players
- **Topic 2:** Trading Physical Crude Oil and Its Logistics
- **Topic 3:** Tankers: Sizes, Chartering, and Marine Operations
- **Topic 4:** Charter Parties, Freight Payment, and Arbitrage
- **Topic 5:** Pipeline Transfers, Scheduling, Tariffs & Storage Losses
- **Topic 6:** Roles of Shipbroker, Bunkering & Net Daily Contribution
- **Reflection & Review:** Transportation & Arbitrage Strategy Case

## **Day 3: Refining Technologies & Environmental Economics**

- **Topic 1:** Crude Oil Refinery Configurations – Skimming, Cracking
- **Topic 2:** Refinery Yield Calculations and Profitability Factors
- **Topic 3:** Upgrading: Cat Cracking, Hydrocracking, Visbreaking, Coking
- **Topic 4:** Sulfur Reduction: Lighter & Heavier Compounds, Measures
- **Topic 5:** Environmental Considerations & Refinery Investments
- **Topic 6:** Refinery Margin Calculation and Netback Techniques
- **Reflection & Review:** Refinery Optimization Simulation

## **Day 4: Product Pricing, Retail Strategy & Supply Chain**

- **Topic 1:** Product Pricing: Determinants, Quotations & Spec-base
- **Topic 2:** Fundamentals of Product Trading and Refined Product Quality
- **Topic 3:** Prices at the Pump, ROI & Industry Return Comparisons
- **Topic 4:** Total Barrel Economics and Transfer Pricing
- **Topic 5:** Retail Marketplace, Integrated Oil Models, and Profitability
- **Topic 6:** Downstream Supply Chain Management & Revenue Optimization
- **Reflection & Review:** Total Barrel Valuation Workshop



## **Day 5: Contracts, INCOTERMS & Legal Risk Management**

- **Topic 1:** Oil Sales Contracts: Key Elements and Confirmation
- **Topic 2:** INCOTERMS FOB, CFR, CIF, DES and Legal Responsibilities
- **Topic 3:** Contract Clauses: Payment, Security, General Terms
- **Topic 4:** Risk Elements: Credit Performance, LOCs, Charter Party
- **Topic 5:** Operational Risks: Vessel Nomination, Quantity, Quality
- **Topic 6:** Legal Aspects of International Trade: US, UK, Singapore
- **Reflection & Review:** Legal Clause & Risk Scenario Roleplay

## **Day 6: Derivatives & Price Risk Management Tools**

- **Topic 1:** Introduction to Risk Management & Price Exposure
- **Topic 2:** Futures vs. Forwards: Market Differences Explained
- **Topic 3:** Characteristics of Futures Contracts & Margin Mechanics
- **Topic 4:** Swaps and Options: Strategic Applications in Crude Oil
- **Topic 5:** Crack Spreads and Trading for Profit
- **Topic 6:** Hedging Unpriced Purchases and Managing Price Volatility
- **Reflection & Review:** Futures Trading and Risk Management Case

## **Day 7: Market Structures, Strategy & Regulation**

- **Topic 1:** Contango and Backwardation in Oil Markets
- **Topic 2:** Trading Objectives and Key Risk Factors
- **Topic 3:** Regulatory Frameworks Across Oil Trading Hubs
- **Topic 4:** Financial Risk Control: Instruments and Governance
- **Topic 5:** Compliance in Crude Oil Transactions and Dispute Resolution
- **Topic 6:** Integrating Trading and Compliance in Global Strategy
- **Reflection & Review:** Strategy Session and Regulation Quiz

## **Day 8: Strategic Outlook & Value Optimization**

- **Topic 1:** OPEC vs. Non-OPEC Strategy and Supply Impact
- **Topic 2:** The Value Chain: From E&P to the Customer
- **Topic 3:** Refinery Business Models and Global Investment Trends
- **Topic 4:** Maximizing Corporate Profits in Volatile Markets
- **Topic 5:** Total Barrel Margin and Net Marketing Revenue Models
- **Topic 6:** Final Review and Strategic Planning Exercise
- **Reflection & Review:** Group Presentations & Closing Discussion

## **FAQ:**

**What specific qualifications or prerequisites are needed for participants before enrolling in the course?**

There are no formal prerequisites. However, participants with a background in oil trading, refining, logistics, legal, or energy economics will benefit most.



### **How long is each day's session, and is there a total number of hours required for the entire course?**

Each day's session lasts approximately 4–5 hours. The full course spans eight days, totaling 32–40 hours of instruction.

### **What is the difference between physical and paper oil markets?**

Physical markets involve the actual buying and selling of crude or refined products, while paper markets involve contracts and derivatives like futures, swaps used for hedging or speculation.

### **How This Course is Different from Other Crude Oil Courses:**

Unlike traditional courses focused on either refining or trading, this program integrates all major facets of the crude oil sector—refining technologies, pricing systems, chartering, energy finance, and legal frameworks—into one cohesive learning journey. It reflects current market realities such as OPEC/non-OPEC dynamics, futures trading strategies, and sulfur regulations. Practical tools like refinery margin calculators, contract clause templates, and pricing strategy exercises are included to enhance applicability. This course stands out by ensuring that participants walk away with not just theoretical knowledge but practical capabilities in crude oil risk management, profitability analysis, and global trade logistics. Every session emphasizes applied skills aligned with the latest benchmarks, compliance mandates, and trading mechanisms.



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Courses**



**Certified Courses By  
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Training Courses**



**Data Analytics Training  
and Data Science  
Courses**



**Environment &  
Sustainability Training  
Courses**



**Governance, Risk and  
Compliance Training  
Courses**



**Human Resources  
Training and  
Development Courses**



**IT Security Training & IT  
Training Courses**



**Leadership and  
Management Training  
Courses**



**Legal Training,  
Procurement and  
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# Training Course Categories



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**Zoom - Online  
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# WHO WE ARE

Agile Leaders is a renowned training center with a team of experienced experts in vocational training and development. With 20 years of industry experience, we are committed to helping executives and managers replace traditional practices with more effective and agile approaches.

## OUR VISION

We aspire to be the top choice training provider for organizations seeking to embrace agile business practices. As we progress towards our vision, our focus becomes increasingly customer-centric and agile.

## OUR MISSION

We are dedicated to developing value-adding, customer-centric agile training courses that deliver a clear return on investment. Guided by our core agile values, we ensure our training is actionable and impactful.

## WHAT DO WE OFFER

At Agile Leaders, we offer agile, bite-sized training courses that provide a real-life return on investment. Our courses focus on enhancing knowledge, improving skills, and changing attitudes. We achieve this through engaging and interactive training techniques, including Q&As, live discussions, games, and puzzles.



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