



A Three-Day Programme: Swissotel Metropole Geneva, 10-12 June 2009

This intensive course provides an appreciation and understanding of key drivers of oil value such as oil refining economics and quality, transportation costs, timing and market price structure. Oil sale contract terms are considered, and various trading strategies such as arbitrage reviewed. The range of forward, futures and options price risk management tools and the principles of hedging are explained.

The programme is highly interactive with numerous illustrations, worked examples and exercises based on real international market situations, for delegates to try in small syndicate groups. This reinforces understanding and generates a high energy and enjoyable learning environment.

Whilst the course is structured as an integral package, delegates may choose to register and attend solely for Day One or for Days Two & Three.

OUTLINE COURSE CONTENT

DAY 1 - Oil Refining, Quality, Blending, Freight & Logistics

Course Introduction

1. Crude Oil Characteristics

- Review of whole crude oil properties and distillation yields. Simple Assay.
- Review different crude oils from samples.
- Simple hydrocarbon chemical characteristics. PONA. Effect of hydrocarbon molecule length/shape on physical and chemical properties.
- Ways of characterising crude oil quality.
- Sulphur. API and Sulphur correlations.
- Other whole crude oil properties: pour point, wax content and viscosity (handling problems); salt content, metals, and acidity (processing problems).

2. The Major Oil Products & their Key Qualities (LPG, Naphtha, Gasoline, Kero, Gasoil, Diesel, Fuel Oil)

- E.g. octane number, smoke point, cloud point.
- Which types of hydrocarbons are good for various product types.
- Niche products - lubes, waxes, bitumen and their key properties.

3. Oil Refining

- Crude Distillation and Topping Refineries, with examples.
- Reforming and other Restructuring. Hydro-skimming refineries and examples.
- Sulphur removal and sweetening. Hydrogen balance in a refinery.
- Conversion Processes: Thermal, catalytic and hydro-cracking. Coking. Regional trends for refinery type.

In each case typical yields will be considered and, for chemical processes, a simple explanation of the chemical changes will be given.

A 25 minute video helps to illustrate the processes in a real refinery.

4. Blending

- Need to blend oils to meet specifications- who and where.
- Principles of blending: linear and non-linear properties with examples. [Day 1 continued on next page...](#)



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Continued.....

DAY 1 - Oil Refining, Quality,
Blending, Freight & Logistics

5. Evaluation of Crude Oil Quality and Gross Product Worth (GPW).

- Absolute and relative valuations.
- Issues: multiple products, seasonality, refining configuration.
- Fixed cut yield basis, optimum product yields, linear programming principles and natural product yields.
- Corrections for viscosity, sulphur, and middle distillate corrections for gravity.
- A simple example valuation of crude oil.

Exercise: calculate GPW for a crude oil.

6. Marine Tanker Shipping

- Marine Tanker Types.
- Tanker freight costs and Worldscale system.
- Chartering.

Exercise: Use of Worldscale system.

7. Crude Oil Valuation

- Breakeven prices for competing crude oils.
- Quality differential, transportation and other differentials.
- Unusual and non-linear properties.

Exercise: started in Section 6 continues.

8. Non-Tanker Logistics

- Oil Terminals and Storage, rental bases, uses, values.
- Pipeline Tariffs and how they are set.
- Overview of barge, rail and road transport.

DAYS 2 & 3 - Oil Trading & Price Risk Management

Day 2

Introduction

1. Oil Markets and Trading

- Crude Oil and Product Supply and Demand.
- Jargon and common terms.
- Market Participants and their motives for trading.

2. Sale and Purchase Contracts

- Types of sale: FOB, CIF, Delivered, DAF, DDU etc. responsibilities of seller and buyer.
- Contract structure, General Terms and Conditions, key clauses, disputes and claims.

3. Oil Pricing

- Pricing mechanisms; crude and product markers and formula pricing; price reporting; flat prices, differentials, pricing periods.

Exercise: Negotiation of Contract Terms for Sale and Purchase of an Oil Product Cargo.

4. Forward and Futures Markets

- BFO contract, partials, bookouts; Dubai/Oman, WTI, gasoil, gasoline.
- Futures exchanges and futures contracts; futures operation and use.
- Summary of crude, gasoil and gasoline futures contracts.

5. Price Risk and Hedging

- Price risk & exposure; long & short (with examples).
- Introduction to hedging and hedging tools; hedging examples.

Exercise: Hedging with Futures

6. Market Price Structure and Trading Strategies

- Contango and Backwardation.
- Differentials; Spread Trading.
- Crude Oil and Product Arbitrage (with examples).

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DAY 3

1. Basis Risk and Swaps

- The background to basis risk.
- Example of a swap deal.
- Credit issues on swaps.
- Electronic trading of swaps.

2. Introduction to Oil Options

- Traded options and option valuation.
- Options in Hedging.
- Real Options in Trading.

3. Fundamental and Technical Analysis of Oil Markets

- Supply/Demand Analysis.
- Technicals - Charts, Statistics etc.

Exercise: *Oil Trading Simulation: delegates work in syndicate groups and use market news and price trends to take trading decisions on arbitrage and speculation given opportunities to deal in physical cargoes and derivatives markets. Profit maximization and clarity of trade reporting are the objectives.*

4. Market Price Structure and Evaluation

- Analysis of Forward Brent Price Curve and Market Quality Differentials.

Exercise: *Contract Risks: delegates review an example of a deal where things go wrong and discuss liability and actions to take at each stage.*

5. Trading Management Issues

- Measuring and Monitoring Risks: Price, Credit, Operational.
- Trading Authorities and Controls.

Discussion, Summary and Feedback

Channoil's Training Faculty

Channoil Consulting Limited provides a wide range of consultancy services in the mid-downstream oil and gas sectors, with particular focus on markets, trading and infrastructure projects. The company also regularly provides training programmes.

Our course leaders have spent considerable periods working in industry, in large oil companies, investment banks or large broking houses, actively involved in trading, supply and in the commercial front line. Now, working predominantly as industry consultants, they are regularly exposed to a wide range of oil market, trading and contract issues. This helps to ensure that their knowledge and approach is realistic, practical and current.

Channoil's consultants are also experienced as trainers, developing and delivering lively and informative courses in several areas. We deliver a module as part of the MSC in Energy, Trade and Finance at the Cass University London, Cass Business School.

We provide several industry open trading and price risk programmes in FSU countries and we work with several companies on a series of specially tailored programmes.





- Registration -

Essentials of Crude Oil and Product Quality,
Value, Trading and Price Risk Management

The fee for this three-day course is £ 1,650 per delegate, to include:

- ◆ course manual in English with all presentations and exercise materials
- ◆ two course lunch
- ◆ morning and afternoon refreshments.

Delegates may alternatively register for only Day One (£800) or Days Two & Three (£1,350). Registration of three delegates for the three-day course entitles a fourth delegate from the same company to a 50% discount. **An early-bird discount of 10% applies if you register by 22nd April.**

Registration fees must be received by latest by **Friday 15th May** . Receipt of course fee secures a place on the programme and places are limited. Cancellations are accepted, with deduction of a £200 cancellation fee, provided advised by 13th May . Substitutions are accepted provided they are advised in advance of course commencement. Payment is to be made by bank transfer.

To register, please provide the following details to Kirsten Dibley at k.dibley@channoil.co.uk

DELEGATE TITLE.....FIRST NAME..... FAMILY NAME.....

COMPANY..... POSITION.....

COMPANY ADDRESS.....

CONTACT NAME AND E-MAIL CONTACT FOR INVOICE.....

SPECIFYING WHETHER YOU ARE ATTENDING:

- FULL 3-DAY PROGRAMME DAY 1 ONLY DAY 2-3 ONLY

