

ALL ONLINE (SELF-STUDY) COURSES

ENTRIMA

*CONTENT & CONTEXT FOR PROFESSIONALS IN THE FIELD OF
COMMODITY & ENERGY MARKETS AND TRADING*

ONLINE CURRICULUM

CURRICULUM – ALL TRAINING COURSES

STYLE: TUTORED VIDEOS SUPPORTED BY SLIDES

Fundamentals

- | | |
|---|---|
| 1. Fundamentals of Commodity Markets | 8 |
| 2. Fundamentals of Energy Trading | 9 |

Regulation

- | | |
|----------------------------|----|
| 3. REMIT (Basic) | 11 |
| 4. MAR (Basic) | 12 |
| 5. EMIR (Basic) | 13 |
| 6. MiFID II (Basic) | 14 |

Fossil fuels & electricity (markets, products, pricing & trading)

- | | |
|---|----|
| 7. Oil (Basic) | 15 |
| 8. Oil (Intermediate) | 16 |
| 9. Oil (Advanced) | 17 |
| 10. Oil (Expert) | 18 |
| 11. Gas (Basic) | 19 |
| 12. Gas (Intermediate) | 20 |
| 13. Gas (Advanced) | 21 |
| 14. Gas (Expert) | 22 |
| 15. Coal & Freight (Basic) | 23 |
| 16. Power (Basic) | 24 |
| 17. Power (Intermediate) | 25 |
| 18. Power (Advanced) | 26 |
| 19. Power (Expert) | 27 |
| 20. Emissions & Carbon markets (Basic) | 28 |

Energy supply contracts

- | | |
|--|----|
| 21. Energy procurement & sales (Basic) | 29 |
| 22. Energy procurement & sales (Intermediate) | 30 |
| 23. Energy procurement & sales (Advanced) | 31 |
| 24. Energy procurement & sales (Expert) | 32 |

Risk

25. Risk management (<i>Basic</i>)	33
26. Risk management (<i>Intermediate</i>)	34
27. Risk management (<i>Advanced</i>)	35
28. Risk management (<i>Expert</i>)	36

Trading operations

29. Back office & Finance (<i>Basic</i>)	37
30. Back office & Finance (<i>Intermediate</i>)	38
31. Back office & Finance (<i>Advanced</i>)	39
32. Back office & Finance (<i>Expert</i>)	40

Contracting

33. Contract management – Master Agreements	41
--	----

Derivatives

34. Futures (<i>Basic</i>)	42
35. Futures (<i>Intermediate</i>)	43
36. Futures (<i>Advanced</i>)	44
37. Futures (<i>Expert</i>)	45
38. Swaps (<i>Basic</i>)	46
39. Swaps (<i>Intermediate</i>)	47
40. Swaps (<i>Advanced</i>)	48
41. Swaps (<i>Expert</i>)	49
42. Options (<i>Basic</i>)	50
43. Options (<i>Intermediate</i>)	51
44. Options (<i>Advanced</i>)	52
45. Options (<i>Expert</i>)	53

STYLE: ANIMATION-STYLE VIDEOS – ENGLISH VOICE & SUBTITLES**Markets**

i. Commodity markets	55
-----------------------------	----

Products

ii. Commodities	56
iii. LNG	57
iv. Bio-energy	58

Derivatives

v. Derivatives – Introduction	59
vi. Derivatives – Position management	60

vii.	Options – Introduction	61
	Pricing	
viii.	Commodity pricing	62
ix.	Commodity indices & price-indexation	63
x.	Price volatility	64
xi.	Liquidity	65
xii.	Forward curves	66
xiii.	Price correlation	67
	Contracting	
xiv.	PPAs – Introduction	68
	Trading	
xv.	Reasons to transact	69
xvi.	Central order book	70
xvii.	Order types	71
	Risk	
xviii.	Risk & opportunity	72
xix.	Value at Risk	73
xx.	The risk management organisation	74
	Trading operations	
xxi.	Clearing	75
xxii.	Netting	76
xxiii.	Margining	77
xxiv.	Settlement	78
xxv.	Blockchain	79

COURSES vs. ONLINE ORACLE

Our learning platform can even be allocated as online oracle, because one can scan with the search function for a topic amongst all individual video lessons for a specific process, a certain concept or particular terminology and be provided with a list of videos that relate. This way, the learning platform can be used to master content and context in a structured way, but also to be consulted when at work for ad hoc, instant support.

PRICING

RFP via info@entrима.org.

THE ONLINE LEARNING ENVIRONMENT

TRAINING COURSES & THEIR MODULES

CONTENT & INTENSITY

COVERAGE BY VIDEO LESSONS AND EXTENSIVE STUDY MATERIALS
- ALL INCLUDING EXAMINATION & CERTIFICATION

TRAINING:
FUNDAMENTALS OF COMMODITY MARKETS

About commodities, the value chain, markets & pricing, and covering a comparison with financial markets.

- 1. Asset classes – Types of markets**
 - About fixed-income, equity, real estate, FX and commodities
 - Concerning risk-reward ratios and risk appetite
- 2. Commodities & commodity markets**
 - About metals, softs & energy, but also freight, carbon & fibres
 - Covering relationships
- 3. Production, storage, transport & consumption – Up-, mid- & downstream**
 - Concerning various types of capacity
 - Including availability and utilization
- 4. Market participants & their role**
 - About commodity trading firms & investors
 - Covering risk diversification
- 5. Spot & forward markets – Physical & financial products**
 - Covering the concept of price volatility
 - Specifics concerning electricity & natural gas - Balancing
- 6. Commodity derivatives – Contract specifications & settlement**
 - Physical delivery & cash settlement.
 - Delivery period & delivery moment
- 7. Pricing of commodities – Price driving factors**
 - Fundamental & non-fundamental price driving factors
 - Price analysis, including seasonality & mean-reversion
- 8. Commodity markets vs. Financial markets**
 - Differences and similarities between the characteristics
 - A comparison is made concerning markets, products & pricing
- 9. The role of speculators**
 - About the impact of speculators on price levels
 - Concerning politicians, policy makers & regulation

INTENSITY:

- **130 MINUTES** (VIDEO LESSONS)
- **9 TESTS**
- **1 EXAM**

TRAINING:
FUNDAMENTALS OF ENERGY TRADING

Covering the who, why, where, when and how of trading, plus related concepts, processes and terminology.

1. **Liberalisation of the Energy Markets**
What is aim of liberalisation? What are the consequences?
2. **Risk**
Risk and return; the risk-reward ratio; quantification vs. qualification.
3. **Market risk**
About price risk.
4. **Risk management**
Identification of risk, measuring risk and control of risk.
5. **Volatility**
The concept volatility explained; calculation & interpretation of volatility figures.
6. **Counterparty risk**
Credit risk and delivery risk.
7. **Credit risk management**
Clearing; netting; credit limits; ratings; sleeving; systemic risk.
8. **Liquidity & Liquidity risk**
Market liquidity vs. funding liquidity.
9. **The trading function**
The role of trading business unit.
10. **The trading organisation**
Front, Middle & Back Office.
11. **Trading**
What is it and how is it organised?
12. **Trading – The reasons for concluding transactions**
About procurement, sales, balancing, hedging, arbitrage and speculation.
13. **Pricing – The order book**
How does trading take place? How are prices set? What orders are executed? When? How?
14. **Trading – Order types**
What order types are applied and for what reasons?
15. **Trading process – Clearing**
Central counterparty; clearing house & members; credit risk; margining & collateralisation.
16. **Trading process – Settlement**
Physical delivery versus cash settlement; settlement procedures.
17. **Trading process – Transaction flow**
Pre-trade, trade & post-trade processes; tasks & responsibilities of front, mid & back office staff.
18. **Trading process – ETRM system**
Energy trading and risk management software; users and purposes.
19. **Markets & Products – Spot vs. Forward markets**
Spot/prompt vs. forward/futures markets.

20. **Markets & Products – Derivatives**
What are derivatives? What are they used for? And by whom?
21. **Markets & Products – Forwards vs. Futures**
What are the differences?
22. **Markets & Products – Contract for difference**
What is a CFD?
23. **Markets & Products – Swaps**
What is a swap?
24. **Markets & Products – Options**
What is a (call/put) option?
25. **Trading platforms – OTC markets & trading**
How is OTC trading organized? What are master agreements?
26. **Trading platforms – Brokerage services**
What is a broker? Inter-dealer brokers vs. broker-dealers.
27. **Trading platforms – Exchange trading**
What features does exchange trading have? How is it organized? Fee structure.
28. **Trading platforms – Trading screens & platforms**
What details are relevant to traders?
29. **Pricing, price drivers & indexation**
What factors drive prices? What is an index?
30. **FX markets & trading**
Exchange rates, Forex exposures; the role of the treasury department.
31. **Accounting – Valuation**
Bookkeeping & accounting rules; M-to-M.
32. **Accounting – Book structure**
How do firms organize internal transfers? What is a book structure? How is accounted for P/L?
33. **Terminology – Upstream, midstream & downstream**
Explanation of the terminology which is related to the value chain.
34. **Terminology – Opening & Closing + Long & Short**
What do the concepts of long or short imply? And opening or closing?

INTENSITY:

- **340 MINUTES** (VIDEO LESSONS)
- **34 TESTS**
- **1 EXAM**

TRAINING:
REMIT

About EU regulation no. 1227/2011.
 Covering inside information, insider trading and market manipulation.

1. Introduction – Background & Scope

- Definition settings
- What does REMIT aim for? Why was it considered needed?
- Which market and products are in the scope of REMIT?
- Which market participants are in the scope of REMIT?

2. Insider trading & Publication of inside information

- The prohibition of insider trading – What does it concern?
- Obligation to publish – What to published? When? Where? Who?
- Practical examples to explain daily situations

3. Market manipulation

- The prohibition of market manipulation – What does it concern?
- Practical examples of market manipulation – Types of abuse
- Conclusion of transactions, order initiation and order types

4. ACER, NRAs & Guidance

- The role of regulators & the interaction between them
- ACER's Guidance – The content, the aim and the target group
- Cross-market, cross-border and cross-commodity manipulation
- Market monitoring

5. Implementing Acts – Reporting & Registration

- Reporting of transaction data & orders to trade
- What data must be reported? Of which products?
- When should reporting take place? And is backloading?
- Reporting of fundamental data – Which data?
- Registration of market participants – Who and who not? When?

6. Compliance – Investigation & Enforcement

- Sanctioning regime – Administrative penalty vs. Criminal sanction
- At company level – Compliance function & Internal procedures
- Incident management – Reporting & action

INTENSITY:

- **170 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:**MAR – A TRADING VIEW**

About EU regulation no. 596/2014.
Covering inside information, insider trading and market manipulation.

1. Introduction

- Background, history & purpose of MAR / MAD II.
- Secondary legislation, plus differences with REMIT.

2. Scope

- Markets, market participants & products in scope of MAR?
- Financial instruments, plus geographic scope.

3. Handling inside information

- Criteria to qualify info as inside info, consequences and more.
- Prohibition of unlawful disclosure.
- Emission allowances market participant (EAMP) has to publish i.i.

4. Insider dealing

- Prohibition of insider dealing. What is it? What is legitimate?
- Persons charged with the execution of orders & insiders.

5. Market manipulation – Basics

- Prohibition of market manipulation & attempted manipulation.
- Indicators of market manipulation + Accepted market practices.

6. Market manipulation – Market cornering

- The concept of “cornering” is explained.

7. Market manipulation – Spoofing & Layering

- In-depth explanation of the application of “spoofing” / “layering”.

8. Market manipulation – Pump & dump

- The concept “pump & dump” is explained, plus “trash & cash”.

9. Market manipulation – Cross-market manipulation

- Examples of “cross-market manipulation”, incl. physical-financial.

10. Real life cases & jurisprudence

- Various case studies, incl. cornering, layering and cross-market.

11. Market monitoring & surveillance

- Professional persons arranging or executing transactions (PPAET)
- Why energy firms are in scope; in-house prevention & detection.
- Suspicious transaction or order report (STOR) & insider lists.

12. Sanctioning

- European minimum sanctions (administrative + criminal).
- National implementation.

INTENSITY:

- **160 MINUTES** (VIDEO LESSONS)
- **12 TESTS**
- **1 EXAM**

TRAINING:**EMIR – OTC DERIVATIVES**

About EU regulation no. 648/2012. Covering its features & implications.

1. Introduction to EMIR – Background

- Covering counterparty credit risk, operational risk & transparency
- Overview of recitals, titles, chapters & articles

2. OTC derivatives – Systemic risk

- Covering the snowball-effect which arose during the credit crisis
- About OTC trading – The related processes & risks
- Re master agreement, credit limits & credit support annex (CSA)

3. Central counterparties (CCPs) – Mandatory clearing

- The clearing process – Authorisation & monitoring of CCPs
- Rules for central counterparties, clearing members & clients
- Reporting of cleared & non-cleared OTC derivatives

4. Collateralisation & Margining – Default fund

- About allowed forms of collateral, haircuts & cash collateral
- Initial & variation margin + highly liquid products + default fund

5. Reporting & Trade Repositories

- About reporting obligations for energy trading firms
- About trade repositories, their role & data protection

6. Monitoring & Supervision

- The role of ESMA and NRAs
- About prudential requirements and other essentials

7. Regulatory implementing & technical standards – Additional acts

- Covering Commission Implementing Regulation
- Including Commission Delegated Regulation

8. US regulation: Dodd-Frank act

- About global energy companies, and/or those active in the US
- The role of US regulators

9. Consequences of EMIR

- About costs, processes and systems
- Concerning capital allocation and the compliance function

INTENSITY:

- **140 MINUTES** (VIDEO LESSONS)
- **9 TESTS**
- **1 EXAM**

TRAINING:
MIFID II – FINANCIAL INSTRUMENTS

About EU regulation no. 600/2014 and EU directive no 2014/65/EU. Covering their features & implications.

- 1. Level 1 legislation – MiFID II & MiFIR**
 - About directive 2014/65/EU and regulation no. 600/2014
 - Including the background: G-20 meeting in Pittsburg, 2009
- 2. Level 2 legislation – RTSs & ITSs**
 - About secondary legislation
 - The role of ESMA, EC, Parliament and Council
- 3. Level 3 measures – Guidance & more**
 - About the development of guidelines and other documentation
 - Including Q&A, FAQ and manuals
- 4. Scope & Financial instruments**
 - Concerning the definition of financial instruments
 - Including EUAs
 - Covering Regulated Markets, MTFs and OTFs
- 5. Ancillary services test**
 - About the interpretation of ‘ancillary’ as well as ‘hedging’
 - Covering RTS 20 (regulatory technical standard, doc.no. 20)
- 6. Consequences for energy companies**
 - Re the consequences for energy traders that have to comply
 - Covering organizational requirements and operations
- 7. Position limits**
 - About RTS 21 (regulatory technical standard, doc.no. 21)
 - Covering the limits that have to be applied & the relevant criteria
- 8. Transparency**
 - Covering pre-trade & post-trade transparency
 - Concerning best price execution
- 9. Capital requirements**
 - About the Basel accords and Basel 3
 - Covering the capital requirements directive, version 4 (CRD IV)
- 10. Reporting**
 - Re trade reporting, transaction reporting and position reporting

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **10 TESTS**
- **1 EXAM**

TRAINING:
OIL – BASIC LEVEL

About the physical aspects of oil, its value chain, pricing and the oil spot markets.

1. Oil value chain – Physicality

- Production and consumption in a nutshell
- About transport and storage of crude and refinery products

2. Reserves & Production

- About exploration & production – Production sharing agreement
- Concerning reserves – conventional and unconventional
- Covering recovery rates & enhanced recovery techniques

3. Crude oil – Grades & benchmarks

- About the quality of oil – Sweet vs. sour & light vs. heavy
- Concerning the consequences for refining and pricing

4. Refining – Refinery capacity & crack spread

- About the refining process, the output
- Concerning the gross processing margin of refineries
- Covering spare capacity and volatility of the crack spread

5. Crude selection – Product slate

- About refinery products - The output of a refinery
- Concerning decision making: The growth product worth

6. Transport – Pipelines & tankers

- About transportation – Oil tankers
- Concerning main routes and the challenges
- Geo-politics

7. Contracts & pricing – Price drivers

- About substitution (crude substitution; renewables)
- Indexation – Platts indices
- The role of speculation

8. OPEC – Role & developments

- The influence of the cartel on pricing
- Agreements within the organisation
- Development of its role over time; spare capacity & renewables

INTENSITY:

- **160 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:**OIL – INTERMEDIATE LEVEL**

About the oil forward markets, exchange-traded oil futures, forward curves, hedging with term contracts and settlement of futures.

Forward oil markets**1. Oil forward markets**

- Covering the differences between spot & forward markets.
- About price volatility in spot & forward markets; mean reversion.

2. Oil exchanges & brokers

- About OTC markets and trading venues for oil.
- Concerning market liquidity, notional value and open interest.

Oil term contracts**3. Oil forwards & futures – The varieties**

- Concerning the most commonly known contracts.
- The time-to-maturity and delivery moment/period.

4. Oil forwards & futures – The application

- Covering asset-backed trading as well as proprietary trading.
- About managing crude & derivatives exposures.

5. Oil forwards curves – Pricing of oil forwards & futures

- About contango & backwardation, including seasonality.
- Covering the convenience yield.

Hedging of oil exposures**6. Hedging oil refinery capacity – Trading crack spreads**

- About procurement & sales on a forward basis; contract mgt.
- Covering crack spreads; what these are & how to trade these.

7. Hedging oil storage capacity – Trading time spreads

- Locking in potential margins on a forward basis.
- Covering time spreads; what these are & how to trade these.

8. Hedging oil transport capacity – Trading location spreads

- Locking in potential margins on a forward basis.
- Covering location spreads; what these are & how to trade these.

Settlement of oil term contracts**9. Settlement of oil forwards & futures – Part 1**

- Including physical delivery & cash settlement.
- Covering the exchange for physicals (EFP) mechanism.

10. Settlement of oil forwards & futures – Part 2

- About trading at settlement (TAS).
- Concerning the alternative delivery procedure.

INTENSITY:

- **180 MINUTES** (VIDEO LESSONS)
- **10 TESTS**
- **1 EXAM**

TRAINING:**OIL – ADVANCED LEVEL**

About oil portfolio management, as well as oil swaps & oil options and their application to hedge oil exposures.

Oil portfolio management**1. Accounting – Book structure & internal transfers**

- About internal transactions & prices, including premiums.
- Concerning book structures, cost allocation & P/L responsibility.
- Covering upstream, midstream & downstream activities.

2. Customer portfolio

- About oil supply contracts; including load forecast.
- Concerning circumstances, e.g. weather, economic situation.

3. Physical oil assets

- About make-or-buy decisions & asset-backed trading.
- Aggregation of rights & obligations (prod., cons. & settlement).

Oil derivatives & flexibility**4. Oil swaps – Physical settlement**

- Concerning solutions for problem solving in the physical world.
- About basis swaps, or location swaps.

5. Oil swaps – Cash settlement

- About financially-settled agreements, including indexation.
- Concerning fixed-for floating contracts.

6. Oil options – Outright options

- About tradable contracts in the OTC markets & on exchange.
- Pricing of oil options; intrinsic value plus time value.

7. Oil options – Application for hedging purposes

- About hedging natural short/long positions with call/put options.
- About oil price caps & floors.

8. Oil options – Embedded optionality

- About volume flexibility & swing optionality in supply contracts.
- Covering structuring, including contracted quantities.

INTENSITY:

- **150 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:**OIL – EXPERT LEVEL**

About oil risk management and the modeling of flexibility in oil portfolios.

Oil risk management**1. Oil risk management – Value-at-risk (VaR) of an oil position**

- About the a commonly applied method to quantify an exposure.
- Covering the relevant time horizon and confidence level.

2. Oil risk management – Risk off-set due to correlation

- About statistical data and concepts, and how to apply these.
- Concerning pairs or proxies.

3. Oil risk management – Value-at-risk (VaR) of an oil portfolio

- About the quantification of aggregated oil positions.
- Considerig opposing long/short positions & correlated positions.

4. Oil risk management – Off-setting risk due to opposing exposures

- About risk off-setting and netting.
- Covering portfolio integration and cross-margining.

Modelling flexibility**5. Modelling – The real option approach**

- About production capacity, transport capacity & storage capacity.
- About management decisions, such as the right to dispatch.

6. Modelling – Physical oil assets as real options

- Considering oil rigs, oil refineries, oil pipelines and oil storages.
- About call options on the crack/time/location spread.

7. Modelling – Complexity: Valuation & hedging of spread options

- About structuring, including exotic options.
- Including spread option valuation models, e.g. Margrabe.

8. Modelling – Optimizing the hedges

- About hedging strategies, e.g. proxy-hedging.
- Concerning dynamic risk management; Delta-hedging.

INTENSITY:

- **180 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
GAS – BASIC LEVEL

About the physical aspects of gas, its value chain, pricing and the gas spot markets.

1. The gas value chain - Physicality

- Production & consumption of natural gas in a nutshell
- About transportation & storage of gas

2. Gas reserves & production – Conventional & unconventional

- Conventional & unconventional reserves; Europe's dependency
- Concerning production techniques & the shale gas revolution

3. Gas quality – Calorific value, Wobbe-index & quality conversion

- Concerning high calorific gas and low calorific gas
- About the quality of natural gas & the conversion of it

4. Gas transport – LNG, pipelines, TSOs & balancing

- About the role of TSOs and balancing regimes
- Concerning gas transport and cross-border capacity
- Re liquefied natural gas (LNG)– Liquefaction & regasification

5. Gas balancing – Balancing regimes, line-pack & imbalances

- Covering an example about the Dutch gas market (TTF)
- Covering causers, helpers & incentives

6. Gas storage – Types & reasons for allocation

- About salt caverns, aquifers and gas field
- Concerning injection and withdrawal, working volume and cost
- Covering security of supply, balancing & seasonality

7. Gas hubs & gas products – Market conventions

- Concerning physical and virtual hubs, incl. NBP, TTF, NCG & HH
- Spot products – Hourly products Within day & Day ahead market
- Summer & Winter contracts – Gas day, gas year & EFA calendar

8. Gas contracts & pricing – Price drivers & oil-indexation

- About oil-indexed gas contracts – Arbitrage in contracting
- Concerning gas-to-gas pricing, gas-to-oil pricing and indices
- About flexibility in supply contracts – ACQ & DCQ

INTENSITY:

- **150 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
GAS – INTERMEDIATE LEVEL

About the gas forward markets, exchange-traded gas futures, forward curves, hedging with term contracts and settlement of futures.

Forward gas markets

1. Gas forward markets

- Covering the differences between spot & forward markets.
- About price volatility in spot & forward markets; mean reversion.

2. Gas exchanges & brokers

- About OTC markets and trading venues for natural gas & LNG.
- Concerning market liquidity, notional value and open interest.

Gas term contracts

3. Gas forwards & futures – The varieties

- Concerning the most commonly known contracts.
- The time-to-maturity and delivery moment/period.

4. Gas forwards & futures – The application

- Covering asset-backed trading as well as proprietary trading.
- About managing gas-related exposures.

5. Gas forwards curves – Pricing of gas forwards & futures

- About contango & backwardation, including seasonality.
- Covering the convenience yield.

Hedging of gas exposures

6. Hedging gas production & consumption capacity

- About procurement & sales on a forward basis; contract mgt.
- Covering assuring future cash flows by price fixation.

7. Hedging gas storage capacity

- Locking in potential margins on a forward basis.
- Covering time spreads; what these are & how to trade these.

8. Hedging gas transport capacity

- Locking in potential margins on a forward basis; NG & LNG.
- Covering location spreads; what these are & how to trade these.

Settlement of gas term contracts

9. Settlement of gas forwards & futures – Part 1

- Including physical delivery & cash settlement.
- Covering nomination & periodic invoicing.

10. Settlement of gas forwards & futures – Part 2

- Concerning the process of cascading.
- Covering the consequences of it for the gas portfolio.

INTENSITY:

- **160 MINUTES** (VIDEO LESSONS)
- **10 TESTS**
- **1 EXAM**

TRAINING:**GAS – ADVANCED LEVEL**

About gas portfolio management, as well as gas swaps & gas options and their application to hedge gas exposures.

Gas portfolio management**1. Accounting – Book structure & internal transfers**

- About internal transactions & prices, including premiums.
- Concerning book structures, cost allocation & P/L responsibility.
- Covering upstream, midstream & downstream activities.

2. Customer portfolio

- About gas supply contracts; including load forecast.
- Concerning circumstances, e.g. weather, economic situation.

3. Physical gas assets

- About make-or-buy decisions & asset-backed trading.
- Aggregation of rights & obligations (prod., cons. & settlement).

Gas derivatives & flexibility**4. Gas swaps – Physical settlement**

- Concerning solutions for problem solving in the physical world.
- About basis swaps, or location swaps.

5. Gas swaps – Cash settlement

- About financially-settled agreements, including indexation.
- Concerning fixed-for floating contracts.

6. Gas options – Outright options

- About tradable contracts in the OTC markets & on exchange.
- Pricing of gas options; intrinsic value plus time value.

7. Gas options – Application for hedging purposes

- About hedging natural short/long positions with call/put options.
- About gas price caps & floors.

8. Gas options – Embedded optionality

- About volume flexibility & swing optionality in supply contracts.
- Covering structuring, including ACQ & DCQ.

INTENSITY:

- **150 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
GAS – EXPERT LEVEL

About gas risk management and the modeling of flexibility in gas portfolios.

Gas risk management

1. Gas risk management – Value-at-risk (VaR) of a gas position

- About the a commonly applied method to quantify an exposure.
- Covering the relevant time horizon and confidence level.

2. Gas risk management – Risk off-set due to correlation

- About statistical data and concepts, and how to apply these.
- Concerning pairs or proxies.

3. Gas risk management – Value-at-risk (VaR) of a gas portfolio

- About the quantification of aggregated gas positions.
- Considering opposing long/short positions & correlated positions.

4. Gas risk management – Off-setting risk due to opposing exposures

- About risk off-setting and netting.
- Covering portfolio integration and cross-margining.

Modelling flexibility

5. Modelling – The real option approach

- About production capacity, transport capacity & storage capacity.
- About management decisions, such as the right to dispatch.

6. Modelling – Physical gas assets as real options

- Considering gas production capacity, pipelines & gas storages.
- About call options on the spark/time/location spread.

7. Modelling – Complexity: Valuation & hedging of spread options

- About structuring, including exotic options.
- Including spread option valuation models, e.g. Margrabe.

8. Modelling – Optimizing the hedges

- About hedging strategies, e.g. proxy-hedging.
- Concerning dynamic risk management; Delta-hedging.

INTENSITY:

- **170 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
COAL & FREIGHT – BASIC LEVEL

About the physical aspects of coal and the coal value chain. Also covering chartering of vessels & freight rates. Including the spot markets & pricing.

1. The coal value chain

- Production, transport, stock piling & consumption in a nutshell
- About steam coal and coking coal allocation

2. Coal reserves & quality – Production & consumption

- About the volumes of production and consumption
- Concerning conventional and unconventional coal reserves
- Peat, (sub-)bituminous coal, lignite, anthracite & graphite
- About the content of sulphur, ash, moisture

3. Shipping – Cargo, vessels & routes

- About the competition between coal, metals & soft commodities
- Concerning panamax, suezmax, capesize vessels and others
- Covering important shipping routes & transport capacity

4. Freight – Chartering & incoterms

- About trip charters and time charters
- About terms & conditions of shipping; p.e. free of board (FOB), cost of insurance and freight (CIF) and delivery at ship (DES)
- Concerning lay-time and demurrage

5. Pricing of freight – Baltic indices

- About the internal and external factors of influence
- Concerning the Baltic indices, such as the Baltic Dry index (BDI)
- Covering fleet composition and fleet age

6. Pricing of coal – Price driving factors & benchmarks

- Re fundamental price drivers
- About production capacity and flooding of mines / shafts
- Concerning the substitution effect with natural gas
- Covering sustainability and renewables

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
POWER – BASIC LEVEL

About the physical features of electricity, the electricity value chain and the power spot markets, including pricing.

1. The power value chain

- About electricity generation & consumption
- Covering transmission in a nutshell

2. Power generation – Facilities & their characteristics

- About power plants, efficiency, carbon intensity & ramping rates
- Concerning cost of investment & maintenance and marginal cost

3. Gross processing margin – Spark & dark spread

- About the margin of gas-fired and coal-fired power plants
- Concerning dispatch, tolling cost and negative margins

4. Transmission – Cables, TSOs & balancing

- About electricity transmission & congestion management
- Concerning the role of TSOs and balancing regimes

5. Power pricing – The merit order

- About supply & demand and the ranking of marginal cost levels
- Concerning power consumption – Profiles & shaping

6. Power products

- Power-specific products (15min.blocks; baseload; peak products)
- Concerning the difference between spot and forward markets

7. Renewables – Impact on pricing

- About wind & PV – Imbalances & shifts in the merit order
- Concerning uncertainty with respect to production forecasts

8. Dispatch – Allocation of facilities, impact of weather & trading

- Re the allocation of generation capacity and/or trading power
- Concerning decision making processes at dispatch units

9. Market coupling – Cross-border transport capacity

- About market coupling throughout Europe & its consequences
- The optimal flow of power & trading for delivery the day ahead

10. Daily auctions – Price curves & matching

- About pricing - supply and demand stacks at auctions
- Concerning bidding strategies for generation capacity

INTENSITY:

- **200 MINUTES** (VIDEO LESSONS)
- **10 TESTS**
- **1 EXAM**

TRAINING:
POWER – INTERMEDIATE LEVEL

About the power forward markets, exchange-traded power futures, forward curves, hedging with term contracts and settlement of futures.

Forward power markets

1. Power forward markets

- Covering the differences between spot & forward markets.
- About price volatility in spot & forward markets; mean reversion.

2. Power exchanges & brokers

- About OTC markets and trading venues for power.
- Concerning market liquidity, notional value and open interest.

Power term contracts

3. Power forwards & futures – The varieties

- Concerning the most commonly known contracts.
- The time-to-maturity and delivery moment/period.

4. Power forwards & futures – The application

- Covering asset-backed trading as well as proprietary trading.
- About managing power-related exposures.

5. Power forwards curves – Pricing of power forwards & futures

- About contango & backwardation, including seasonality.
- Covering the convenience yield.

Hedging of power exposures

6. Hedging power production & consumption capacity

- About procurement & sales on a forward basis; contract mgt.
- Covering assuring future cash flows by price fixation.

7. Hedging power transmission capacity

- Locking in potential margins on a forward basis.
- Covering location spreads; what these are & how to trade these.

Settlement of power term contracts

8. Settlement of power forwards & futures – Part 1

- Including physical delivery & cash settlement.
- Covering nomination & periodic invoicing.

9. Settlement of power forwards & futures – Part 2

- Concerning the process of cascading.
- Covering the consequences of it for the power portfolio.

INTENSITY:

- **150 MINUTES** (VIDEO LESSONS)
- **9 TESTS**
- **1 EXAM**

TRAINING:
POWER – ADVANCED LEVEL

About power portfolio management, as well as power swaps & power options and their application to hedge power exposures.

Power portfolio management

1. Accounting – Book structure & internal transfers

- About internal transactions & prices, including premiums.
- Concerning book structures, cost allocation & P/L responsibility.
- Covering upstream, midstream & downstream activities.

2. Customer portfolio

- About power supply contracts; including load forecast.
- Concerning circumstances, e.g. weather, economic situation.

3. Physical power assets

- About make-or-buy decisions & asset-backed trading.
- Aggregation of rights & obligations (prod., cons. & settlement).

Power derivatives & flexibility

4. Power swaps – Physical settlement

- Concerning solutions for problem solving in the physical world.
- About basis swaps, or location swaps.

5. Power swaps – Cash settlement

- About financially-settled agreements, including indexation.
- Concerning fixed-for floating contracts.

6. Power options – Outright options

- About tradable contracts in the OTC markets & on exchange.
- Pricing of power options; intrinsic value plus time value.

7. Power options – Application for hedging purposes

- About hedging natural short/long positions with call/put options.
- About power price caps & floors.

8. Power options – Embedded optionality

- About volume flexibility & swing optionality in supply contracts.
- Covering structuring and structured deals.

INTENSITY:

- **170 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
POWER – EXPERT LEVEL

About power risk management and the modeling of flexibility in power portfolios. Covering wind.

Power risk management

1. Power risk management – Value-at-risk of a power position

- About the a commonly applied method to quantify an exposure.
- Covering the relevant time horizon and confidence level.

2. Power risk management – Risk off-set due to correlation

- About statistical data and concepts, and how to apply these.
- Concerning pairs or proxies.

3. Power risk management – Value-at-risk of a power portfolio

- About the quantification of aggregated power positions.
- Considerig opposing long/short positions & correlated positions.

4. Power risk management – Off-setting risk (opposing exposures)

- About risk off-setting and netting.
- Covering portfolio integration and cross-margining.

Modeling flexibility

5. Modelling – The real option approach

- About production capacity & transmission capacity.
- About management decisions, such as the right to dispatch.

6. Modelling – Physical power assets as real options

- Considering power generation cap. & power transmission cables.
- About call options on the spark/dark spread or location spread.

7. Modelling – Complexity: Valuation & hedging of spread options

- About structuring, including exotic options.
- Including spread option valuation models, e.g. Margrabe.

8. Modelling – Optimizing the hedges

- About hedging strategies, e.g. proxy-hedging.
- Concerning dynamic risk management; Delta-hedging.

9. Modelling – Weather elements (precipitation & wind data)

- About the impact of renewables on the power markets.
- Hydro: Precipitation, cascading, pump storage.
- Wind: Concerning temperature, location, direction, wind roses, diurnal cycle, pressure gradient force, coriolis force, friction.

INTENSITY:

- **170 MINUTES** (VIDEO LESSONS)
- **9 TESTS**
- **1 EXAM**

TRAINING:
EMISSIONS & CARBON MARKETS – BASIC LEVEL

About sustainability, renewables, emission right & carbon credits.

1. Fundamentals of emissions

- Concerning the greenhouse gasses and their consequences
- About Kyoto & UNFCCC
- Covering the Conferences of Parties (COP)

2. Emission rights – Carbon markets

- About the basic idea of creating a price incentive, or cost
- Concerning the trading of emission rights
- Explaining Annex I, Annex II & Annex B

3. Emission trading scheme (ETS)

- Covering EU's Directorate-General for Climate Action (DG CLIMA)
- About the EU-ETS cap & trade mechanism; how does it work?
- Concerning European Union Allowances (EUAs) & registration

4. Clean development mechanism (CDM) & Joint implementation (JI)

- Concerning project-based UN initiatives
- Certified emission rights (CERs) & emission reduction units (ERUs)

5. Guarantee of origin, green certificates & others

- About carbon credits
- Concerning green certificates, verified emission rights & others
- Covering initiatives based on voluntary participation

6. Pricing of emission rights

- About the ETS phases: 2005-2007, 2008-2012, 2013-2020
- Concerning price driving factors
- Carbon taxation instead of capping & trading

INTENSITY:

- **140 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
ENERGY PROCUREMENT & SALES – BASIC LEVEL

About supply contracts:
Flexibility and optionality
re volume in agreements.

1. Introduction to energy procurement & sales

- Covering the difference between the wholesale & retail markets
- Re business-to-business (B2B) & business-to-consumer (B2C)

2. Types of energy supply contracts

- The characteristics of supply contracts, including force majeure
- About pricing; fixed & floating, including indexation
- Covering click contracts

3. Take-or-pay contracts

- About the minimum off-take volume
- Concerning invoicing & securing future cash flows

4. Volume flexibility contracts (basics)

- About an minimum and maximum off-take
- Covering the pros & cons for supplier and consumer

5. Swing contracts (basics)

- Regarding fixed total volume but various allocation over periods
- About the advantages & disadvantages for supplier & consumer

6. Embedded optionality

- About click options, validity options, swing options & more
- Concerning option pricing & risk premium
- Covering structuring of contracts

7. Volume flexibility contracts (advanced)

- About the pricing of flex options & flex contracts
- Regarding the hedging process of a flex contract
- Covering the concept of Delta-hedging

8. Swing contracts (advanced)

- About the allocation process
- Covering pricing of swing options & valuation of swing contracts
- Concerning the hedging process of such a contract

INTENSITY:

- **130 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
ENERGY PROCUREMENT & SALES – INTERMEDIATE LEVEL

About supply contracts:
Flexibility and optionality
re volume in agreements.

1. Pricing – Energy products

- Price driving factors – Factors of influence (wholesale & retail)
- About fundamental & non-fundamental price drivers
- Including taxation & subsidy

2. Pricing – Forward curves (Basic)

- Concerning contango, backwardation & convenience
- About the storage theory, expectations theory & the cost of carry

3. Pricing – Forward curves (Advanced)

- Regarding seasonality in the commodity business
- About marginal cost and mean-reversion

4. Price volatility

- About future volatility, expected volatility & historical volatility
- Regarding market risk & risk management

5. Premiums in contract price

- About the structuring of contracts
- Concerning profile premium, validity premium, liquidity premium, risk premium & imbalance premium

6. Hedging with forward & futures

- Covering producer & consumer hedges
- About the hedging of natural short positions with term contracts
- Re the hedging of natural long positions with forwards/futures
- Concerning the rolling of a hedge; roll yield

INTENSITY:

- **110 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
ENERGY PROCUREMENT & SALES – ADVANCED LEVEL

About supply contracts:
 Flexibility and optionality
 re volume in agreements.

Options

1. Consumer hedges with options (part I)

- About the creation of a price cap & the related premium
- Concerning the remaining potential to profit from price fall

2. Consumer hedges with options (part II)

- About a vertical call spread
- About a collar - the set up of a protective construction at no cost

3. Producer hedges with options (part I)

- About the creation of a price floor & the related premium
- Concerning the remaining potential to profit from price increase

4. Producer hedges with options (part II)

- About a vertical put spread
- About a collar - the set up of a protective construction at no cost

Swaps

5. Consumer hedges with swaps (part I)

- Explaining what a swap is & how it can be applied by a consumer
- Regarding on average swaps
- Covering capped swaps

6. Consumer hedges with swaps (part II)

- Including more types of swaps for consumers
- About participation swaps
- About range out swaps

7. Producer hedges with swaps (part I)

- Explaining what a swap is & how it can be applied by a producer
- Regarding on average swaps
- Covering capped swaps

8. Producer hedges with swaps (part II)

- Including more types of swaps for producers
- About participation swaps
- About range out swaps

INTENSITY:

- **150 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
ENERGY PROCUREMENT & SALES – EXPERT LEVEL

Re accounting aspects:
 Valuation, M-to-M, book
 structures and transfers.

Pricing & Valuation

1. Pricing & valuation – Mark-to-market

- Concerning the accounting against actual value/price
- About settlement price calculations
- Covering the liquidation value

2. Pricing & valuation – Price reporting agencies

- About accepted benchmarks
- Covering Platts, ICIS, Argus Media & others
- Concerning IOSCO principles, ethical codes & policies

3. Pricing & valuation – Indices & indexation

- About index calculation & publication
- Concerning the characteristics of an index
- About what indices are used for & what an index may indicate

Accounting

4. Accounting – Book structures

- About accounts/books; at division, department & personal level
- Concerning lock-in models, for the hedging of physical assets
- The relationship between the business units Trading & Sales

5. Accounting – Internal transfers

- About deals between the business units 'sales' & 'trade'
- Covering transactions between 'trade' & 'treasury department'
- Re transfers between 'generation'/'asset management' & 'trade'

6. Accounting – Internal transfer pricing

- About liquidity premium & validity premium
- Concerning risk premium & profile premium
- Covering performance management & P/L responsibility

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
RISK MANAGEMENT – BASIC LEVEL

About the identification of risk.
Covering various types of risk
and related concepts &

1. Risk management - Introduction

- The basics of risk management
- About policies, methodologies and organisation

2. Risk appetite

- About risk tolerance and risk acceptance
- Concerning risk & reward and the ratio between them

3. Market risk – Probability distribution curves

- About normal, log-normal & other distributions
- Covering skew, tail risk & one-time events

4. Price volatility

- Covering different types of volatility (e.g. historical & implied)
- Various ways to calculate volatility & how to interpret outcomes

5. Counterparty credit risk

- About external clearing and internal credit limits
- Concerning collateralization & margining

6. Liquidity risk

- About trading activity in markets (or the lack of it) & the consequences for market participants

7. Alpha & Beta

- About the capital asset pricing model of Markovitch
- Covering market & company risk; systemic vs. non-systemic risk

8. Analyzing & Modeling

- Concerning the modeling of (energy) asset-related businesses
- About fundamental, technical, statistical & psychological analysis

9. Forecasting

- About load forecasting & price forecasting
- Covering production, customer off-take & contract settlement

10. Correlation & linear regression

- About statistical price relationships
- Concerning correlation – Model risk, incl. normality & linearity

INTENSITY:

- **190 MINUTES** (VIDEO LESSONS)
- **10 TESTS**
- **1 EXAM**

TRAINING:
RISK MANAGEMENT – INTERMEDIATE LEVEL

About the assessment of risk. Quantification of risk by the VaR approach through various methods, and including stress testing.

1. Value at Risk (VaR) – The concept

- About the quantification of risk; concerning risk metrics
- Covering probability distribution, time horizon & confidence

2. Stochastic processes

- About probability distribution curves
- Stochastic processes – Jump, diffusion & jump-diffusion process

3. VaR – Parametric approach

- About the most simple method to quantify risk
- Concerning the variance/co-variance methodology
- Examples & calculations, incl. the interpretation of the outcome

4. VaR – Historical simulation

- About a very practical method to quantify risk
- Including calculations & examples

5. VaR – Monte Carlo simulation

- About the most complex, but flexible method to quantify risk
- Concerning the creation of assumptions & generating outcomes
- Including calculations & examples

6. Stress testing

- About what-if, worst case & worst losing streak scenarios
- About the pros & cons of stress tests

7. Expected shortfall - CVaR

- About the conditional value at risk methodology
- Concerning the average loss in abnormal market circumstances
- Including calculations & examples

8. Implementation of VaR

- Back testing
- Management attention

INTENSITY:

- **170 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
RISK MANAGEMENT – ADVANCED LEVEL

About risk control.
Covering hedging
strategies and methods.

1. VaR for multi-commodity portfolios

- Portfolio management; VaR for combined positions
- About the aggregation of VaR at portfolio level
- Concerning correlation & cross-margining

2. VaR for multi-FX portfolios

- About FX exposures
- Concerning risk off-setting and a natural hedge

3. Model risk

- Covering assumptions and their consequences
- Concerning probability distributions
- About skew & skewness

4. Hedging strategies

- Concerning different ways of hedging
- About a perfect hedge, a value hedge & a beta hedge
- Comparing the outcomes and selecting the best strategy

5. Proxy-hedging & cross-hedges

- About hedging with a liquid product & basis risk
- Concerning proxy selection and hedge ratios

6. Delta-hedging

- About an objective & dynamic risk management approach
- Concerning timing & volume – When to hedge? What volume?

7. Pros & cons of hedging

- About the advantages & disadvantages of mitigating market risk
- Concerning commonly used arguments to hedge or not to hedge

INTENSITY:

- **180 MINUTES** (VIDEO LESSONS)
- **7 TESTS**
- **1 EXAM**

TRAINING:
RISK MANAGEMENT – EXPERT LEVEL

About the risk management organisation. Including methods and limits. Covering risk parameters and their meaning.

1. Risk management & the organisation

- About enterprise-wide risk management (EWRM)
- Concerning tools, methods and structures
- Covering segregation of duties

2. Limit structures

- About the combination of a position limit and a risk limit
- Concerning liquidity risk management
- Stochastic processes – Jump, diffusion & jump-diffusion process

3. Asset & portfolio management

- Concerning the client base and contractual obligations & rights
- About production capacity, the allocation of it & maintenance

4. Metrics in risk management

- Concerning credit value at risk & economic capital
- About value at risk, cash flow at risk & margin/earnings at risk

5. Performance management – Risk capital

- Concerning capital allocation & expected return
- About RAROC, RORAC & RARORAC

6. Performance management – Sharpe ratio

- About measuring performance
- Concerning its definition, the calculation and interpretation
- Including its pros & cons

7. Performance management – Treanor ratio

- About alpha & beta
- Concerning its definition, the calculation and interpretation
- Including its advantages & disadvantages

8. Credit risk management

- About (un)expected loss & credit value at risk
- Concerning probability of default, loss given default, current exposure, potential future exposure & current exposure

INTENSITY:

- **170 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
BACK OFFICE – BASIC LEVEL

About back office ops:
The processing of deals
& the transaction cycle.

1. Administrative processes

- Explaining the back office tasks & responsibilities
- About invoicing & payments; accounts payable & receivable
- Concerning nomination, allocation & reconciliation

2. Straight through processing

- The deal life cycle; from deal capture & confirmation to delivery, incl. clearing, margining & collateralisation and settlement

3. End-of-day processes

- About daily (or periodic) reporting; End-of-day/month/year
- Covering position reports, P/L statements & performance mngt.

4. Margining

- About initial margin, variation margin & maintenance margin
- Concerning correlation, haircut & cross-margin
- Covering discounts or reduction on deposits

5. Netting

- Covering the concept of netting
- About bilateral & multilateral netting
- Incl. netting by novation, plus close-out and settlement netting
- Concerning master agreements & counterparty credit risk

6. Settlement

- Concerning daily settlement & final settlement regarding futures
- About settlement procedures; settlement date or period
- Including settlement of commodity options
- About cash settlement

INTENSITY:

- **180 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
BACK OFFICE – INTERMEDIATE LEVEL

About book keeping:
accounting principles
and book structures.

1. Accounting – Mark-to-Market valuation

- About valuation of trading positions & fair value
- Concerning IFRS, IAS and hedge accounting

2. Accounting – Book structure

- About accounts/books; at division, department & personal level
- Concerning lock-in models, for the hedging of physical assets

3. Accounting – Internal transfers & transactions

- About deals between the business units 'sales' & 'trade'
- Covering transactions between 'trade' & 'treasury department'
- Re transfers between 'generation'/'asset management' & 'trade'

4. Accounting – Internal transfer pricing

- About liquidity premium & validity premium
- Concerning risk premium & profile premium
- Covering performance management & P/L responsibility

5. Structuring

- Concerning the impossibility to match a hedge with an exposure
- About summer and winter contracts
- Covering the hedge of a profiles with base & peak load contracts

6. Upstream, midstream & downstream

- About sub-accounts within the trading business unit
- Explaining what relates to upstream, midstream & downstream
- Covering exploration & production, storage, transport and marketing & consumption

INTENSITY:

- **110 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
BACK OFFICE – ADVANCED LEVEL

About pricing:
indexation, indices and
the role of price

1. Data & news providers

- About price information & news and well-known providers
- Including Thomson Reuters, Bloomberg, Montel & others

2. Price reporting agencies

- About accepted benchmarks
- Covering Platts, ICIS, Argus Media & others
- Concerning IOSCO principles, ethical codes & policies

3. Indices – Price indexation

- About index calculation & publication
- Concerning the characteristics of an index

4. Index – Application of indices

- About what indices are used for
- Covering what an index may indicate

5. Commodity indices

- Concerning well-known commodity indices
- About S&P GSCI, TR/Jefferies CRB and Rogers Commodity index

6. Reporting – Internal (financial reporting)

- Concerning position reporting, price reporting & valuation
- About market risk limits, position limits and credit limits
- Covering mark-to-market valuation & result
- Including financial ratios, such as balance sheet ratios

7. Reporting – External (regulatory reporting)

- Concerning the consequences of EMIR & REMIT
- Covering ICT solutions
- Transaction reporting & reporting of fundamental data

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **7 TESTS**
- **1 EXAM**

TRAINING:
BACK OFFICE – EXPERT LEVEL

About financial crime:
Money laundering,
terrorist financing & fraud.

1. Financial crime

- Covering the fundamentals of financial crime, including global impact and including various types of financial crime

2. Market abuse

- Regarding insider trading & market manipulation
- Concerning front running and other illegal activities

3. Fraud by external parties

- About identity theft & overtaking identifying information
- Concerning manipulation of existing identity

4. Fraud by employees

- Concerning various types of fraud by management or staff
- About theft of checks & removing money from back account
- Covering indicators to trace fraud; profiling

5. Tax fraud

- About tax fraud
- Concerning the VAT carousel, or missing trader fraud
- Including an example from the carbon markets

6. Money laundering

- About money launderers, their aim & their activities
- Covering placement, layering & integration
- Including the Financial Action Task Force (FATF)

7. Financial crime regulation

- About regulatory packages relating to financial crime
- Including anti-corruption & anti-terrorism financing regulation
- Concerning compliance & low regulatory enforcement areas

8. Crime management

- About crime surveillance
- Concerning prevention
- Including ICT solutions; technologies & systems

INTENSITY:

- **100 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
MASTER AGREEMENTS – BASIC LEVEL

About contract management: Legal agreements for OTC deals.

- 1. Introduction to master agreements**
 - To provide the basics and explain what is covered
 - General provisions versus commercial terms
- 2. Contents of legal frameworks**
 - About rights & obligations
 - Payment due dates, business days, timetables
- 3. Types of master agreements**
 - About ISDA, EFET, GTMA, IETA and SCoTA frameworks
 - Terms of Trading
- 4. Confirmation process**
 - About deal confirmation and automated processes
 - Confirmation process & confirmation officers in the back office
- 5. Settlement process**
 - Delivery, invoicing and payment, including nomination process
 - Physical delivery contracts and cash settlement contracts
- 6. Netting**
 - About bilateral netting, multilateral netting & close-out netting
 - Including exposure netting & payment netting
- 7. Defaults**
 - What are termination processes? When can these occur?
 - When can force majeure be claimed? What does it concern?
- 8. Credit support annex**
 - About amendments to master agreements such as CSAs
 - Including collateralisation

INTENSITY:

- **110 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:**FORWARDS & FUTURES – BASIC LEVEL**

About the basics of term contracts: Features and contract specifications.

1. Fundamentals of forward & futures contracts

- Term contracts in a nutshell, including definitions
- About the working of forwards & futures

2. Forward & futures contract specifications

- About oil, gas, coal, power & carbon contracts
- Concerning power & gas specifics – delivery period vs. moment
- Differences between a forward contract and a futures contract

3. Trading forwards & futures – Speculating & hedging

- Learn how to apply forwards & futures for proprietary trading
- Master the application of term contracts to hedge exposures
- Concerning basis risk

4. Forwards & futures position management

- About opening and closing positions
- Covering short selling - What is it? How does it work?
- About clearing of contracts
- Including collateralization, margining & leverage

5. Settlement of forward & futures contracts

- About physical delivery and cash settlement
- Concerning the alternative delivery procedures (ADP)
- Covering exchange futures for physicals (EFP)
- Including trading at settlement (TAS)

6. Cascading of power & gas contracts

- About the process of cascading
- Concerning the consequences for margining
- The consequence of cascading for a hedge
- Market liquidity of month, quarter and year contracts

INTENSITY:

- **150 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
FORWARDS & FUTURES – INTERMEDIATE LEVEL

About the pricing of term contracts and hedging with these

1. Pricing of forwards & futures

- The theoretical relationship between spot price & forward price
- About the storage theory
- Including the cost of carry; cost of storage, insurance & capital

2. Forward curves

- About contango & backwardation
- Concerning convenience yield
- Covering seasonality & mean reversion

3. Hedging a consumer exposure

- Concerning hedging with a forward or futures contract
- Re hedging a natural short position with a long forward/future

4. Hedging a producer exposure

- Concerning hedging with a forward or futures contract
- Re hedging a natural long position with a short forward/future

5. Rolling over futures positions

- Concerning the roll yield in case of re-hedging
- Covering roll strategies
- About investments strategies of institutional investors & others

6. Basis risk & Hedge ratio

- About the effectiveness of hedges
- Including the consequence of an imperfect hedge
- Concerning the significance of a hedge volume

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
FORWARDS & FUTURES – ADVANCED LEVEL

About futures spreads and spread futures. Re basis, time & X-

1. Futures spreads

- About quality spreads, location spreads & time spreads
- About cross-commodity spreads
- Concerning the bid-ask spread

2. Trading futures spreads – Time spreads

- About buying & selling a time spread
- Concerning virtual storage capacity

3. Trading futures spreads – Location spreads

- About buying & selling a location spread
- Covering basis trading
- Concerning virtual transport capacity

4. Trading futures spreads – Cross-commodity spreads

- About buying & selling a cross-commodity spread
- Concerning spark& dark spreads, as well as crack spreads
- Concerning virtual power generation capacity & oil refining cap.

5. Features of spread trading

- About liquidity of futures spreads
- Concerning cross-margining

6. Statistical arbitrage

- Concerning hedge fund strategies
- About so-called long-short strategies
- About correlation

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
FORWARDS & FUTURES – EXPERT LEVEL

About weather derivatives:
 Their features & usage to
 hedge weather exposures.

1. Weather elements & weather exposures

- Weather elements in a nutshell; impact on business & economy
- About weather risk; influences of weather on supply & demand
- Concerning the impact of weather on energy prices

2. Fundamentals of weather derivatives

- About the underlying values; references
- Concerning settlement
- The challenges of weather derivatives & the hedging process
- Covering basis risk

3. Temperature – HDD & CDD contracts

- About temperature-related derivatives
- Concerning heating degree days and cooling degree days
- Covering pay-off

4. Application of weather derivatives – Examples for utilities

- Applying HDD futures & options
- Incl. a practical example for a utility or gas supplying company
- Covering market prices, probabilities and securing cash flows

5. Wind derivatives – Examples for energy companies

- About wind-related derivatives
- Concerning wind and wind power
- Wind power indices
- Covering the Carvill hurricane index (CHI)
- A hedge for oil & gas companies; CHI hedge for rig exposure

6. Data management & analytics – Wind

- About wind data and wind data management
- Concerning pressure gradient force, coriolis and friction
- Covering diurnal cycle, wind direction, temperature & location

INTENSITY:

- **110 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

TRAINING:
SWAPS – BASIC LEVEL

About the basics of swap agreements; in specific interest rate

1. Treasury management

- About funding and financing, including cash flow management.
- Concerning asset & liability management (ALM).

2. Fundamentals of swap contracts – Application of swaps

- Swap agreements in a nutshell, incl. the definition & concept.
- About derivatives in general, and swaps in particular.
- Reduction of finance cost or mitigate interest rate exposure.

3. Swap contract specifications – Settlement of swaps

- About the legs, notional amount, reference rate, maturity, coupon frequency.
- Covering settlement of interest rate swaps.
- Differences between IRS and commodity swaps.

4. Interest rates, exposures & forward rate agreements (FRAs)

- Learn about interest rate market conventions.
- Master knowledge about forward rate agreements.

5. Types of swaps – Pricing of the legs

- About fixed-for-fixed, floating-for-floating, fixed-for-floating.
- Covering indices and references, incl. EONIA, LIBOR & EURIBOR.
- Including the settlement price calculation procedure.

6. Valuation of interest rate swaps (IRS) – Part 1

- About the value of swaps at the conclusion of a deal.
- Concerning the value of swaps during their lifetime.

7. Valuation of interest rate swaps (IRS) – Part 2

- About overnight indexed swap (OIS).
- Concerning the clean & dirty value of swaps.

8. Trading of swaps

- About the role of broker-dealers in the OTC market.
- Concerning the role of (investment) banks.
- The consequence of trading on own account.
- Market liquidity for swaps.

INTENSITY:

- **140 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:**SWAPS – INTERMEDIATE LEVEL**

About energy swaps:
Covering various types &
their application as hedge.

1. Fundamentals of energy swaps – Oil, gas, coal, power & carbon

- The basics of energy swaps, including settlement types.
- Mastering energy swaps terminology.

2. Physical energy swaps

- Learn about so-called location swaps.
- Master the fundamentals of basis swaps.

3. Financial energy swaps

- About cash settlement, reference prices and indexation.
- Covering fixed-for-floating swaps.

4. Cross-commodity swaps

- Covering differential swaps, margin swaps, double-up swaps.
- About hedging of an oil refinery, power plant or other asset.

5. Swaps for consumers

- About on average swaps.
- Concerning capped swaps.

6. Swaps for producers

- About participation swaps and range out swaps.
- Concerning floored swaps.

7. Single payment swaps & prepaid swaps

- Concerning various other types of energy swaps.
- Including explanation of these swaps work and can be applied.

8. Energy swaps in depth

- Covering the valuation of energy swaps.
- Including the reasons to enter into an energy swap.

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:**SWAPS – ADVANCED LEVEL**

About FX markets, FX rates & FX swaps. Covering their specs & application.

1. Fundamentals of FX markets

- About currency markets & currency rates
- Mastering factors that impact currency rates

2. Quotation of FX rates

- About ISO/SWIFT codes
- Concerning country codes, base currency & variable currency

3. Currency pairs & cross-rates

- Learn about direct and indirect quoted rates
- Master expertise regarding currency combinations & double crossings

4. FX forwards

- Covering forward FX markets
- Including forward foreign exchange transactions

5. FX swaps – Fundamentals

- About forward/forward, today/tom and tom/next
- Concerning forward-forward
- Covering swap points
- Including terminology, such as cash leg and term leg

6. FX swaps – Hedging, regulating & rolling

- About managing cross-currency cash positions
- Concerning hedging with FX swaps
- Including the regulation of liquidity positions
- Covering the rolling of FX forward positions with FX swaps

7. FX swaps – More details

- Concerning opening & closing positions
- About cross-currency interest rate swaps
- About valuation and financial results

INTENSITY:

- **110 MINUTES** (VIDEO LESSONS)
- **7 TESTS**
- **1 EXAM**

TRAINING:
SWAPS – EXPERT LEVEL

About the basics of energy swaptions, as well as credit default swaps.

Swaptions**1. Swaptions - Fundamentals**

- The basics of swaptions, including contract specifications
- Mastering swaption-related terminology
- Compound derivative: Payers swaption and receivers swaption

2. Swaptions - Essentials

- About swaption styles and extendables
- Concerning fixed tenor and/or fixed end-date

3. Swaptions – Energy swaptions (oil-indexed gas contracts)

- Learn about the application of swaptions, to manage exposures
- Including an example concerning a utility's gas portfolio

4. Swaptions - Valuation

- Covering the Black model and one-factor-no-arbitrage models
- Concerning the lattice-based approach and trees

CDSs**5. Credit default swaps - Fundamentals**

- About credit risk and credit risk management
- Covering defaults, auctions and credit insurance tools
- Including the contract specifications and relevant details

6. Credit default swaps - In-depth

- About reference entities/obligators
- Concerning jump risk and systemic risk, including regulation

7. Credit default swaps - Credit events

- About credit rating agencies, their role and regulation
- Concerning physical delivery and cash settlement

8. Credit default swaps - Valuation

- Covering the spread or premium and credit spread rates
- Including the probability model, recovery rate & credit curve

INTENSITY:

- **120 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
OPTIONS – BASIC LEVEL

*About the basics of options:
 Their features, contract
 specs & premium.*

1. Fundamentals of options

- What are options? What types are there? What is a call or put?
- A right versus an obligation

2. Contract specifications

- About the structure of option contracts
- Concerning strike price, style, maturity, expiration & settlement

3. Options trading & position management

- About long & short and opening & closing option positions
- Concerning the holder and the writer of an option

4. P&L structures, intrinsic value & pay-off

- About the value and investment at expiration
- Concerning the P/L of contracts at maturity
- How to speculate with options?
- Margining of option positions

5. Option premium – Factors of influence

- About option pricing; intrinsic value plus time value
- Concerning market-specific factors & contract specific elements

6. Moneyness – In- at- or out-of-the-money

- Terminology
- About at-the-money, in-the-money and out-of-the-money

7. Hedging with options – Strategies

- Application of options on physical positions and exposures
- Hedging strategies with call options and/or put options
- Hedging (physical) long positions and/or short positions
- Hedging at no cost – Application of collars

8. Synthetics – Arbitrage

- About the put-call-parity; concerning time value
- Re synthetically creating a call from a put, or vice versa
- Risk-free opportunities - Arbitrage strategies

INTENSITY:

- **180 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
OPTIONS – INTERMEDIATE LEVEL

About the valuation of options. Covering various models.

- 1. Option pricing & valuation – Implied volatility & skew**
 - Concerning implied volatility; what is it & what does it indicate?
 - About positive & negative skewness and the impact on pricing
 - Covering the volatility curve & volatility smile
- 2. Black & scholes model – European style options**
 - Concerning the most well known option valuation model
 - Covering equity options & how it may apply to commodities
 - About log-normal distribution curves
- 3. Binomial models – American style options**
 - Concerning a method to price early exercise options
 - About probabilities to certain outcomes & significance of it
 - Explaining the concept of binomial trees & option valuation
- 4. Monte Carlo simulation models – Asian style options**
 - About the valuation of exotic options
 - Concerning simulations based on assumptions
 - Generation of a seemingly unlimited number of possibilities
- 5. Straddle model – Rules of thumb**
 - About a simplified way to price option
 - Concerning option pricing by heart; quick & dirty
 - Covering a method to roughly indicate the option premium
- 6. Option strategies – Combinations of options**
 - About straddle, strangle, butterfly & condor
 - Concerning premium (decay), break-even points & optimum
 - Including profit/loss graphs or pay-off structure
- 7. Option strategies – Hedging methodologies (Delta-hedging)**
 - About delta-hedging; what is it and how is it applied?
 - Concerning hedging of an option; about timing & volume
 - Applied to option positions of companies, including examples

INTENSITY:

- **160 MINUTES** (VIDEO LESSONS)
- **7 TESTS**
- **1 EXAM**

TRAINING:
OPTIONS – ADVANCED LEVEL

About option portfolio management: the Greeks and embedded options.

Hedging

1. Advanced hedging strategies – For consumers

- Concerning European style & Asian style options plus indexation
- About vertical call spreads & a 3-way collar
- Covering the application of cash settled option contracts

2. Advanced hedging strategies – For producers

- About European style & Asian style options plus indexation
- Concerning vertical put spreads & a 3-way collar
- Covering the application of cash settled option contracts

Greeks

3. Options risk management – 1st order Greek variables

- About Delta, Vega, Theta & Rho
- Concerning sensitivity analysis with options, including examples

4. Options risk management – 2nd order Greek variables

- Covering Gamma, Charm, Vanna and Vomma
- Concerning the Greeks in an advanced way, including examples
- About cross-dependency & inter-relationships between Greeks

Complex structures

5. Embedded options – Energy supply contracts

- About click contracts with price fixation moment(s)
- Concerning validity period and validity premium
- Covering risk premiums in the pricing of energy supply contracts

6. Take or Pay options – Business decisions

- About real options, in the sense of business decisions
- Concerning securing cash flows by the supplier

7. Flex options – Volume flexibility

- About flexibility in the total off-take in an energy supply contract
- Covering how to handle the related uncertainty by the supplier
- Including risk management, pricing and Delta-hedging

8. Swing options – Fluctuating off-take

- About contracts with flexibility in when to off-take how much
- Concerning the allocation of volume over various time periods

INTENSITY:

- **180 MINUTES** (VIDEO LESSONS)
- **8 TESTS**
- **1 EXAM**

TRAINING:
OPTIONS – EXPERT LEVEL

About exotic & real options: their features and their use for

Option classifications

1. Exotic options – Asian, binary & barrier options

- About path-dependent options, p.e. Asian style & barrier options
- Covering binary options, forward start options & cliquet options
- Concerning pricing and Greeks of exotics

2. Real options – Applied to physical assets

- Covering option spreads & spread options + the way they work
- Options to expand/contract, initiate/abandon, change in/output
- About the modeling of physical assets as options
- Concerning real options and the real option approach
- Including cross-commodity options

Modeling

3. Modeling storage capacity – Time spread options

- Modeling oil/gas storage facilities
- Hedging storage capacity by trading time spreads
- Concerning seasonality and price volatility

4. Modeling transport capacity – Location spread options

- Modeling pipeline, shipping and transmission capacity
- Hedging transport capacity with location spreads
- Cross-border trading & cross-region trading

5. Modeling production capacity – Margin options

- Modeling oil refineries and power plants
- About crack spread options & spark/dark spread options
- Hedging production capacity with margin spreads

Valuation models

6. Pricing & hedging spread options – Complex models

- Covering the complexity of spread option valuation models
- About the input variables of spread option valuation models
- Concerning the output of such models
- Covering the variety of Greeks and multiple Deltas to hedge

INTENSITY:

- **140 MINUTES** (VIDEO LESSONS)
- **6 TESTS**
- **1 EXAM**

THE ONLINE LEARNING ENVIRONMENT

CRASH COURSES

1-MINUTE VIDEOS
ON A RANGE OF TOPIC

CONCEPTS, PROCESSES & TERMINOLOGY EXPLAINED IN A NUTSHELL
- GLOSSARY

CRASH COURSE: COMMODITY MARKETS

MARKETS

This crash course explains what a markets is and how it can be defined. The crash course includes videos about various ways to classify markets. Attention is given to wholesale and retail markets and the differentials between them. Likewise applies to spot and term contracts, or physical and financial markets. It is also explained what balancing markets concern and what the role of transmission system operators is in that field. Last, but not least, it is set out what granularity concerns, which is specifically applicable for electricity and gas contracts.

This crash course covers the following videos:

1. Commodity markets – Introduction
2. Commodity markets – Overview
3. Commodity markets – Physical versus financial markets
4. Commodity markets – Liberal versus regulated markets
5. Commodity markets – Wholesale & retail markets
6. Commodity markets – Spot & forward markets
7. Commodity markets – Spot markets – Intraday & day ahead markets
8. Commodity markets – Term contracts
9. Commodity markets – Granularity
10. Commodity markets – Balancing markets
11. Commodity markets – Market participants

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	25 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: COMMODITIES

COMMODITIES

This course sets out some of the basics regarding natural resources and classifies different groups of natural resources. Analogously, commodities are set out and classified. Last, but not least, attention is given to the supply chain and some related concepts, activities and terminology.

This crash course covers the following videos:

1. Natural Resources – Definition
2. Natural Resources – Categories – Ubiquitous versus localised resources
3. Natural Resources – Categories – Biotic versus abiotic resources
4. Natural Resources – Categories – Renewables versus non-renewables
5. Natural Resources – Categories – Actual versus potential resources
6. Natural Resources – Natural resource management
7. Commodities – Definition
8. Commodities – Asset classes
9. Commodities – Classifications
10. Commodities – Indirect investments
11. Commodities – Commoditisation
12. Commodities – Capacity as tradable product
13. Commodities – Complexity of commodity markets
14. The supply chain – The value chain
15. The supply chain – Up-, mid- and downstream
16. The supply chain – Time horizon
17. The supply chain – Trading activities

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	40 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: LNG

PRODUCTS

This crash course concerns liquefied natural gas, its supply chain, the basics of pricing and risk management.

This crash course covers the following videos:

1. Introduction
2. Train
3. Quality
4. Storage
5. Transport
6. Safety
7. Contracting
8. Incoterms
9. Pricing
10. Trading strategies
11. Risk management

- A. Examination
- B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	20 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: BIO-ENERGY

PRODUCTS

Biofuels include bio-liquids and biomass. Bio-liquids consist of bio-ethanol and biodiesel, whereas biomass includes wood pellets. Biofuels can be used to replace fossil fuels.

This crash course covers the following videos:

1. Introduction
2. Solid biomass – Wood pellets
3. Solid biomass – Chips
4. Solid biomass – Pricing
5. Liquid biofuels – Introduction
6. Liquid biofuels – Bio-ethanol
7. Liquid biofuels – Biodiesel
8. Liquid biofuels – Pricing
9. Biogas
10. Ethics

- A. Examination
- B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	40 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: DERIVATIVES – INTRODUCTION

PRODUCTS

This course concerns a general introduction to derivatives contracts, including futures contracts, swap agreements and option contracts. The lessons give insight in what these financial instruments concern and how they can be applied.

This crash course covers the following videos:

1. Introduction
2. Term contracts
3. Swaps
4. Options
5. Combinations
6. Settlement
7. Contract-for-difference
8. Tool to speculate
9. Tools to hedge
10. Derivatives markets

- A. Examination
- B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	20 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: DERIVATIVES – POSITION MANAGEMENT

PRODUCTS

This course provides insight in the opening of a futures position and closing it. It also sets out the terminology long and short. Furthermore, the lessons allow to master the concept of rolling a futures position, by describing the process and touching upon related aspects.

This crash course covers the following videos:

1. Introduction
2. Opening transaction – Long & short position
3. Closing transaction – Eliminate position
4. Long versus short
5. Rolling a futures position – Introduction
6. Rolling a futures position – Investor or speculator
7. Rolling a futures position – Hedger
8. Rolling a futures position – The concept
9. Rolling a futures position – Practical aspects
10. Rolling a futures position – Roll yield
11. Rolling a futures position – Forward curve structure
12. Rolling a futures position – Rolling a short position
13. Rolling a futures position – Rolling a long position
14. Notional value
15. Open interest

- A. Examination
- B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	20 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: OPTIONS - INTRODUCTION

PRODUCTS

This course provides all fundamentals of options, including the working of these instruments, both from the position of the holder and writer, option valuation, factors of influence and settlement of contracts, as well as the financial performance of positions.

This crash course covers the following videos:

1. Single-sided right
2. Tool to speculate or hedge
3. Position management
4. A premium to compensate risk
5. Options trading – Brokers & exchanges
6. Open interest
7. Contract specifications – Introduction
8. Contract specifications – Strike
9. Contract specifications – Maturity
10. Contract specifications – Underlying value
11. Contract specifications – Contract size
12. Contract specifications – Settlement type
13. Contract specifications – Style
14. Contract specifications – Currency
15. Contract specifications – Additional notes
16. Position management – Right vs obligation
17. Position management – Opening & closing
18. Position management – Settlement
19. Position management – Netting
20. Intrinsic value – Introduction
21. Intrinsic value – Pay-off
22. Intrinsic value – Option positions
23. Premium – Introduction
24. Premium – Pricing of options
25. Premium – Price driving factors – Introduction
26. Premium – Price driving factors – Volatility
27. Premium – Price driving factors – Price u.v.
28. Premium – Price driving factors – Cost of carry
29. Premium – Price driving factors – Strike price
30. Premium – Price driving factors – Maturity
31. Premium – Price driving factors – Option style
32. Valuation – Intrinsic value & time value
33. Moneyness – Introduction
34. Moneyness – At-the-money
35. Moneyness – In-the-money
36. Moneyness – Out-of-the-money
37. Moneyness – Application
38. Premium erosion
39. Positions – Investing & speculation
40. Positions – Leverage
41. Positions – Financial performance – Long call
42. Positions – Financial performance – Short call
43. Positions – Financial performance – Long put
44. Positions – Financial performance – Short put
45. Positions – Financial performance – Zero-sum

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	60 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: COMMODITY PRICING

PRICING

This crash course contains animation-style videos with narration which set out the pricing of commodities. It is explained how pricing takes place and what factors influence commodity prices. In specific, attention is given to fundamental price driving elements, such as the availability and utilisation of physical capacity, FX rates, weather and seasonality.

This crash course covers the following videos:

1. A price
2. Scarcity
3. Rational economics versus behavioural economics
4. Economics – Law of supply and demand
5. Economics – Demand and utility
6. Economics – Supply and cost
7. Economics – Equilibrium
8. Economics – Marginal utility versus marginal cost
9. Economics – Fixed versus floating costs
10. Price driving factors – Introduction
11. Price driving factors – Demography & economy
12. Price driving factors – Reserves & production
13. Price driving factors – Technology & economic viability
14. Price driving factors – Consumption & processing
15. Price driving factors – Storage & storage capacity
16. Price driving factors – Transport & transport capacity
17. Price driving factors – Social factors & politics
18. Price driving factors – Quality
19. Price driving factors – FX rates
20. Price driving factors – Inflation
21. Price driving factors – Correlation & diversification
22. Price driving factors – Substitution
23. Price driving factors – Environmental issues
24. Price driving factors – Seasonality
25. Price driving factors – Weather
26. Price driving factors – Mean-reversion – Introduction
27. Price driving factors – Mean-reversion – Merit order
28. Price driving factors – Mean-reversion – Merit order – Electricity
29. Price driving factors – Mean-reversion – Merit order – Electricity – Complications

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	55 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: COMMODITY INDICES & PRICE-INDEXTION

PRICING

This crash course contains animation-style videos with narration which set out both the topic 'commodity indices' and the concept of 'price-indexation'. It is explained what an index concerns, what the differences are between single-commodity indices and multi-commodity indices, as well as how they are calculated and how they can be applied. In addition, the roles of administrators and contributors is set out. Furthermore, attention is given to price-indexation. It is set out how parties make use of an index as reference price in case of supply contracts and derivatives.

This crash course covers the following videos:

1. Commodity indices – Introduction
2. Commodity indices – Multi-commodity indices
3. Commodity indices – Single commodity indices
4. Commodity indices – Price reporting agencies
5. Commodity indices – Pricing panel
6. Commodity indices – Application
7. Commodity indices – Regulation
8. Price-indexation – Introduction
9. Price-indexation – Maintaining benchmarks
10. Price-indexation – Cross-commodity

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	30 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: PRICE VOLATILITY

PRICING

This crash course is about the concept price volatility, the calculation of volatility numbers, the application of it and its interpretation. Including probability distribution curves and skewness.

This crash course covers the following videos:

1. Introduction
2. Quantification & interpretation
3. Types of volatility
4. Calculation
5. Probability distribution curves
6. Skewness
7. Application

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	25 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: LIQUIDITY

PRICING

Liquidity is often applied terminology in the field of trading. Market participants require liquidity in order to perform their tasks. However, in the traded markets, there are two types of liquidity, namely market liquidity and funding liquidity. Both concepts are set out during this crash course and relevant aspects are covered.

This crash course covers the following videos:

1. Introduction
2. Funding liquidity – Introduction
3. Funding liquidity – Funding trading activities
4. Funding liquidity – Cost of capital
5. Market liquidity – Introduction
6. Market liquidity – Bid-ask spread
7. Market liquidity – Market depth
8. Market liquidity – Market volume & deal size
9. Market liquidity – Market participants
10. Market liquidity – Market resilience
11. Market liquidity – Price volatility
12. Market liquidity – Conversion to cash
13. Market liquidity – Order types
14. Market liquidity – Liquidity per product
15. Market liquidity – Churn rate
16. Market liquidity – Market making

- A. Examination
- B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	30 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: FORWARD CURVES

PRICING

This crash course is about the concept price correlation, the calculation of the correlation coefficient, the application of it and its limitations. including regression, normality and linearity.

This crash course covers the following videos:

1. Price chart
2. Definition
3. Contango & backwardation
4. The storage model
5. Arbitrage
6. Convenience

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	25 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: PRICE CORRELATION

PRICING

This crash course is about the concept price correlation, the calculation of the correlation coefficient, the application of it and its limitations. including regression, normality and linearity.

This crash course covers the following videos:

1. Introduction
2. Positive or negative
3. Correlation coefficient
4. Types of correlation
5. Application of correlation
6. Calculation of the correlation coefficient
7. Model risk

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	25 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: PPAs

CONTRACTING

Covering power purchase agreements, including contract specifications, pricing and volume risk management.

This crash course covers the following videos:

1. Introduction
2. Lifecycle of a power generation project
3. Project finance
4. Bankability
5. Roles of actors
6. Overview of PPA obligations
7. Timing requirements
8. Tariff structures
9. Invoicing & payment
10. Risk allocation & mitigation
11. Commercial operational data
12. Development or construction risk
13. Operational phase risks
14. Change in law risk
15. Change in tax
16. Force majeure
17. Fuel supply & price risk
18. Insurance
19. Dispute resolution

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	60 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: REASONS TO TRANSACT

TRADING

This educational programme covers the reasons to transact. It explains why market participants enter into deals. By means of video lessons is explained what motivates parties to buy or sell. Attention is given to various physical reasons to conclude deals, as well as various financial reasons to enter the market. Furthermore, the difference between hedging and speculation is set out and specific attention is given to particular concepts like asset-backed trading, proprietary trading and statistical arbitrage.

This crash course covers the following videos:

1. Reasons to transact – Introduction
2. Reasons to transact – Intermediary services
3. Reasons to transact – Commodity & capacity
4. Reasons to transact – Physical & financial reasons
5. Reasons to transact – Sourcing & sales
6. Reasons to transact – The black box concept
7. Reasons to transact – Balancing
8. Reasons to transact – Liquidation
9. Reasons to transact – Hedging
10. Reasons to transact – Asset-backed trading
11. Reasons to transact – Arbitrage
12. Reasons to transact – Speculation
13. Reasons to transact – Investing
14. Reasons to transact – Comparison
15. Reasons to transact – Proprietary trading
16. Reasons to transact – Statistical arbitrage

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	35 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: CENTRAL ORDERBOOK

TRADING

This crash course contains animation-style videos with narration which set out the working of the central order book, which is operated by trading venues. It is explained how orders are being processed and how pricing takes place. Besides, attention is given to market liquidity and what the bid-ask spread concerns. It is set out the difference between order initiation and aggression, which orders have priority and which rules apply to order execution.

This crash course covers the following videos:

1. Price formation – Introduction
2. Price formation – One-way pricing
3. Price formation – Two-way pricing
4. Price formation – Price drivers
5. Central order book – Introduction
6. Central order book – Order book details
7. Central order book – Rules of engagement
8. Central order book – Opening rotation
9. Central order book – During trading hours – Order submission
10. Central order book – During trading hours – Order initiation
11. Central order book – During trading hours – Order aggression
12. Central order book – During trading hours – Order execution
13. Central order book – Functioning
14. Central order book – Filling the order book
15. Central order book – RFQ
16. Central order book – Voice brokering
17. Central order book – Tick & tick size

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	40 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: ORDER TYPES

TRADING

Market participants apply various orders types when submitting instructions to transact. The features differ per order type and can be used to the advantage of market participants. This way, specific desires can be met, taking into account economical, operational or logistical aspects.

This crash course covers the following videos:

1. Introduction
2. On-screen & off-screen
3. Algorithms
4. Market order
5. Limit order
6. Complex orders
7. Time-specific order
8. Good-for-day order
9. Good-till-date order
10. Good-till-cancelled order
11. Immediate-or-cancel order
12. Fill-or-kill order
13. All-or-nothing order
14. Pre-&post-trade auction
15. Market-or-limit-on-open-or-close order
16. Smart orders – Day ahead implicit electricity auction
17. Conditional orders
18. Stop order
19. Stop-limit order
20. Trailing-stop order
21. Market-if-touched order
22. One-cancels-the-other order
23. Iceberg order
24. Discretionary order
25. Prioritisation
26. Choice market

❖ Level:	Basic	No prerequisites
❖ Intensity:	40 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: RISK & OPPORTUNITY

RISK

Risk and opportunity belong to each other. On a coin one would be the flip side of the other. In this course it is explained what these concepts concern and how they can be measured. Price behaviour is covered, as well as probability distributions and their characteristics.

This crash course covers the following videos:

1. Risk versus uncertainty
2. Risk versus maximum loss
3. Price behaviour – Price dynamics & Forecasting
4. Price behaviour – Market analysis
5. Price behaviour – Price behaviour
6. Price behaviour – Random walk
7. Price behaviour – Statistics – Stochastic variables
8. Price behaviour – Statistics – Stochastic processes
9. Price behaviour – Mean reversion
10. Price behaviour – Moving averages
11. Probability distribution – Histogram versus distribution
12. Probability distribution – Cumulative
13. Probability distribution – Uniform
14. Probability distribution – Discrete
15. Probability distribution – Continuous
16. Probability distribution – Normal
17. Probability distribution – Relevant characteristics
18. Probability distribution – Log-normal
19. Probability distribution – Mean versus median
20. Price behaviour – Statistics – General
21. Price behaviour – Statistics – Variance
22. Price behaviour – Statistics – Covariance
23. Price behaviour – Statistics – Variance versus covariance
24. Price behaviour – Statistics – Covariance versus correlation
25. Risk analysis
26. Risk-return ratio
27. Risk – Definition
28. The subjectivity of management decisions
29. Risk quantification

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	60 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: VALUE AT RISK

RISK

This course provides insight in the concept of risk and explains how it differs from uncertainty. The lessons cover in-depth the quantification of risk by means of various methodologies, both on the level of an individual position and a complex portfolio. Next to value at risk, stress tests are given attention.

This crash course covers the following videos:

1. Dynamic & flexible
2. The meaning of the value at risk
3. 3 value at risk methods – Introduction
4. The parametric approach
5. Linearity versus non-linearity
6. Relevant parameters – Introduction
7. Relevant parameters – Confidence level
8. Relevant parameters – Time horizon
9. Relevant parameters – Typical settings
10. Historical simulation – Introduction
11. Historical simulation – Pros & cons
12. Monte Carlo simulation – Introduction
13. Monte Carlo simulation – Models
14. Monte Carlo simulation – Different probability distributions
15. Monte Carlo simulation – Step-by-step application
16. Monte Carlo simulation – Practical application in Excel
17. Stress testing – Introduction
18. Stress testing – Ways to perform stress tests
19. Stress testing – Worst case performance & worst losing streak
20. Stress testing – Expected shortfall – Introduction
21. Stress testing – Expected shortfall – Example
22. Stress testing – Disadvantages
23. 3 value at risk methods – Advantages & disadvantages – Comparison
24. 3 value at risk methods – Advantages & disadvantages – Listings
25. Calculations – Individual position - 1
26. Calculations – Individual position - 2
27. Calculations – Portfolio – 2 positions
28. Calculations – Correlation coefficients – Impact on VaR
29. Calculations – Correlation coefficients – Limitations
30. Calculations – Portfolio – 3 positions
31. Calculations – VaR versus P&L
32. Calculations – FX exposures
33. Cash flow at risk

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	90 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: RISK MANAGEMENT

RISK

This course covers how companies setup and operate a risk management function. It includes the basics of performing risk management, such as policies, methodologies and the organisation and infrastructure. The course also covers the application of models and limit structures.

This crash course covers the following videos:

1. Enterprise-wise risk management
2. Central or local setup
3. Tasks
4. Responsibilities
5. Three pillars of effective risk management – Policies
6. Three pillars of effective risk management – Methodologies
7. Three pillars of effective risk management – Organisation & infrastructure
8. Trade & risk management systems – Introduction
9. Trade & risk management systems – Vendor selection
10. Implementation of dynamic risk management – 10 steps
11. Criteria for a risk model – Introduction
12. Criteria for a risk model – Qualitative criteria
13. Criteria for a risk model – Quantitative criteria
14. Criteria for a risk model – Criticism & support
15. Risk model – Modeling
16. Risk model – Calibration
17. Risk model – Choosing the ideal model
18. Model risk – Assumptions
19. Model risk – Fat tails
20. Model risk – Skewness
21. Limit structures – Introduction
22. Limit structures – By trading venues
23. Limit structures – By clearing organisations
24. Limit structures – By firms with a trading function – Introduction
25. Limit structures – By firms with a trading function – Position limit
26. Limit structures – By firms with a trading function – Risk limit
27. Limit structures – By firms with a trading function – Stop-loss limit
28. Limit structures – By firms with a trading function – Limits on Greek parameters
29. Limit structures – By firms with a trading function – Volume limit & Price limit at front office
30. Limit structures – By firms with a trading function – From business activity to limit

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	90 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: CLEARING

TRADE OPERATIONS

Clearing is a crucial process in trade operations. Clearing is applied in case of exchange-trading, although OTC deals can also be cleared. How clearing works and what it concerns is set out in this course. The roles of various parties is described, amongst which are central counterparties and (general) clearing members.

This crash course covers the following videos:

1. Counterparty risk
2. Master agreement
3. Credit risk management
4. What is clearing?
5. Clearing activities
6. Novation
7. Central counterparty clearing
8. OTC-cleared
9. Central counterparty
10. Clearing members
11. Brokers
12. Default fund
13. Side-effects of central clearing – Static effects
14. Side-effects of central clearing – Dynamic effects
15. Side-effects of central clearing – Second round effects

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	35 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: NETTING

TRADE OPERATIONS

Netting is a sub-process clearing & settlement. Netting can be organised in case of OTC transactions as well with exchange-trading. Hence, it is either performed bilaterally or multilaterally. How this works and what its consequences are is set out in this course.

This crash course covers the following videos:

1. Introduction
2. Netting by novation
3. Close-out netting
4. Settlement netting
5. Advantages of netting
6. Bilateral versus multilateral netting

- A. Examination
- B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	20 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: MARGINING

TRADE OPERATIONS

Margining is a crucial process in trade operations. It is a sub-process of clearing. During the lifetime of a contract security has to be arranged for. How this works is set out in this course, including initial margin and variation margin, as well as cross-margining. This course covers the following videos:

1. Counterparty risk management
2. Initial margin
3. Variation margin
4. Margin call
5. Bilateral deals
6. Exchange-trading
7. Fee structure
8. Novation
9. The process of margining
10. Direct & general clearing members
11. Initial margin to financially manage close-out
12. Settlement
13. Daily calculations
14. Leverage
15. Cost of capital
16. Replacement risk & credit risk
17. Mutual & non-mutual margin requirements
18. Money transfer & margin requirement
19. The margining process
20. Variation margin calculation
21. Initial margin calculation
22. Periodic reconsiderations
23. Cash management & price data
24. General clearing members
25. Direct market access
26. Cross-margin – Introduction
27. Cross-margin – Price correlation
28. Requirements for options – Introduction
29. Requirements for options – Calculations
30. Requirements for options – Maintenance margin
31. Requirements for options – Haircut

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	20 minutes	Including examination
❖ Language:	Voice & text	English
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CRASH COURSE: SETTLEMENT

TRADE OPERATIONS

Settlement is a crucial process in trade operations. At maturity a contract has to be respected and agreements have to be effectuated. How this works is set out in this course. This course covers the following videos:

1. Introduction
2. Settlement types
3. Supply contracts vs. derivatives
4. Physical delivery vs. cash settlement
5. Settlement risks
6. Avoiding physical delivery
7. Settlement date
8. Dynamics in settlement dates
9. Cash settlement
10. Contracts with delivery moment – Introduction
11. Contracts with delivery moment – Last trading day & maturity
12. Contracts with delivery moment – Seller's choice
13. Contracts with delivery moment – Physical delivery
14. Contracts with delivery period – Introduction
15. Contracts with delivery period – Time-to-maturity
16. Invoicing & payment
17. Specific differences
18. First & last notice day
19. Closing or rolling
20. Exchange-traded futures vs. OTC-traded forwards
21. Alternative delivery procedure
22. EFP – Introduction
23. EFP – Applications
24. EFP – Applications – Swap futures for physicals
25. EFP – Applications – Open a futures position
26. EFP – Applications – Close a futures position
27. EFS – Exchange of futures for swaps
28. Trading at settlement
29. TAS order initiation & matching
30. Trading at marker
31. Contracts with delivery period – Settlement
32. Contracts with delivery period – Lower margin requirement during delivery
33. Contracts with delivery period – Cascading – Introduction
34. Contracts with delivery period – Cascading – Volume neutrality
35. Contracts with delivery period – Cascading – Value neutrality
36. Contracts with delivery period – Cascading – The objective
37. Contracts with delivery period – Cascading – Impacting margin requirements

A. Examination

B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	90 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

CRASH COURSE: BLOCKCHAIN

TRADE OPERATIONS

This crash course touches in a nutshell on the technique of blockchain, its characteristics and its application.

This crash course covers the following videos:

1. Introduction
2. Digital distribution
3. Cryptography
4. Consensus
5. Immutability
6. Time stamps
7. Resilience
8. Security
9. Two types of blockchain
10. Permissionless blockchains
11. Permissioned blockchains
12. Data reporting

- A. Examination
- B. Certification

❖ Level:	Basic	No prerequisites
❖ Intensity:	20 minutes	Including examination
❖ Language:	Voice & text	English
❖ Including:	Examination	Certification upon passing

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