

Online Graduate Program

2014 Program Outline

Available Online Training via CapitalWave's
Digital Learning Environment (DLE)



CapitalWave Inc.
TECHNOLOGY ENABLED LEARNING

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Overview

Duration Equivalent: 10 Days

This program is designed to prepare delegates for a career working in financial markets. It covers all of the major instruments that are traded and explains their key features, their risks, together with how they are priced, how they are traded and how they are used to speculate and hedge by both institutions and customers.

Objectives

By the end of the program delegates will be able to:

- ✓ Understand the terminology used and key features of the major products traded in the global financial markets
- ✓ Identify the risks inherent in client and institution market exposures and positions
- ✓ Appreciate the key benefits of derivative products
- ✓ Apply hedging tools to manage risks

Benefits of Attending

Individuals who attend will:

- Become familiar with the key features and uses of the major cash and derivative products traded in global financial markets
- Experience the pressure and excitement of trading and decision making through engaging simulations and trading games
- Develop skills in building and making effective presentations and sales pitches
- Learn how to use derivative products to both trade and hedge and to appreciate the key factors involved in their pricing

Pre-Requisite Courses

There are no formal pre requisites however a working knowledge of Excel and financial mathematics is important. The financial mathematics will be provided to delegates via eLearning.

Who Should Attend

This program is designed to provide the knowledge and skills required for new entrants into financial markets. The main target audience is newly hired university graduates however it would also be appropriate for existing junior staff being promoted.

Course Delivery

The course is delivered using an engaging combination of instructor led theory sessions and practical case studies, activities and exercises.

Course Activities

- ✓ eLearning
- ✓ Exercises
- ✓ Case Studies
- ✓ Class Discussions
- ✓ Group Projects
- ✓ Simulations
- ✓ Examination
- ✓ Presentations
- ✓ End of Module Review

10 Day Graduate Program

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Duration

In its outlined form, this program is EQUAL to a 10 day live training program. It can be delivered in any number of delivery arrangements, ranging from 4-12 weeks in length.

The internal L&D professional would need to determine the delegate weekly time commitment to the program.

Course Activities

In addition to the more traditional exercises and case studies, the graduate program includes a number of very interactive activities that are both highly educational and engaging for delegates. These include:

Real Market News Trading Game

Each Module begins with a class discussion of the current news stories. This reinforces the need for delegates to become news aware and to be analysing the potential effects a story may have:

- How will it impact market prices
- How will it impact the banks customers
- How can we make money out of it

Delegates are broken into small groups for the duration of the program. Each group needs to take trading positions within stated position limits across 6 markets using real market prices. The positions are marked-to-market and groups are able to change their positions during each analysis session.

A leader-board ranks the team's performances and the winning team is one with the highest profit at the end of the program.

Group Projects

Working in team's delegates will complete a number of group projects based around client scenarios related to the course content being covered. The groups need to:

- Submit solutions and calculations to a number of technical questions to show they have understood the course content.
- Develop a solution for the customer that addresses their needs.
- Build a PowerPoint based sales pitch to win the business
- Make their presentation in front of an audience.

Projects range from small and very focused where time allocated is limited to 1 hour, up to complex scenario's where groups will need to spend significant time (primarily outside of class hours) developing their solutions.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Trading Simulations

Delegates will take part in a number of trading simulations using the Capital Market Simulator. These fast paced market simulations allow delegates to experience the high pressure of real trading and volatile markets in a tightly controlled environment.

Each delegate needs to manage their own positions, make prices and react to market news whilst trying to make money in an exciting and competitive environment. For graduates this is often their first exposure to trading and delegates find the experience highly engaging and enjoyable.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 1: Course Introduction and the Money Market

Lesson 1: Introduction

Course Introduction

Money market overview

The role of the money market

The money market desks function within an institution

Money market participants

Monetary policy and influences on interest rates

☰ Real News Trading Game

Delegates will form into their project and trading game groups and enter into their opening positions for the Real News Trading Game.

Lesson 2: Price Making and Money Market Products

Introduction to the principle of price making

Price makers versus price takers

The role of 'flow' on price making desks

Key money market products

Discounted versus interest bearing products

LIBOR and other interest rate benchmarks

☰ Price makers versus price takers

Delegates will participate in a open outcry based trading game where they will explore the different roles of price makers and price takers.

Lesson 3: The Yield Curve

Introduction to yield curves

Review of current major yield curves

Understanding changes in yield curve shapes

Implied forward rates

Yield curve trading strategies

Riding the yield curve

☰ Analysing yield curve trades

Delegates will be presented with a yield curve and asked to calculate implied forward rates and establish yield curve trading positions.

Lesson 4: Pricing Money Market Securities

Reviewing the time value of money

Yield to maturity

Pricing discount securities

Discount rates

Comparing yield and discount basis

Selling securities before maturity

☰ Calculating cash flows on money market securities

Delegates will price a number of money market securities, ensuring they understand the principles of the time value of money and NPV.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 2: Fixed Income Products and Markets

Lesson 1: Bond Market Maths

Overview of the capital markets
Key features of fixed income securities
Pricing interest bearing securities
Understanding Module count conventions
Accrued interest
Duration and convexity
☰ calculating cash flows on fixed income securities

Delegates will learn to manually price a bond and to calculate clean and dirty prices. They will also calculate hedging ratio's using modified duration.

Lesson 2: Fixed Income Products and Markets

Bond market overview
Government bond markets
The US bond market
Government bond issuance process
Strips, TIPS and agency bonds
Corporate bond overview
The role of ratings in the bond markets
☰ Arbitrage using bond strips

Delegates will compare the price of a standard government bond to its component coupon and principal strips to identify any arbitrage possibilities.

Lesson 3: Repurchase Agreements

Introduction to Repurchase agreements
Different types of repo
Overview of the repo market
Repo applications
Credit risk, 'haircuts' and repo margins
Repo 105 and the impact of the credit crisis
☰ Calculating cash flows on repo transactions

Delegates will undertake a number of exercises based on calculating repo cash flows and collateral requirements after haircuts are applied.

Lesson 4: Emerging Markets

Emerging markets overview
History of emerging markets
The BRIC economies
Crisis mechanisms in emerging markets
The Brady plan
Emerging market bond trading
Investments and returns in emerging markets
☰ Analysing emerging market returns

Delegates will examine the different returns available across key emerging markets and discuss the potential pitfalls investments may entail.

10 Day Graduate Program

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Module 3: Foreign Exchange and Equity Markets

Lesson 1: Foreign Exchange

Overview of the foreign exchange market

Types of FX transactions

Spot foreign exchange

The mechanics of a spot quote

Market participants and trade motivations

Influences on FX rates

Settlement processes and conventions

☰ FX trading simulation

Delegates will take on the roll of a spot dealer and trade a simulated market testing their trading, price making and position management skills.

Lesson 2: Foreign Exchange Forwards

Introduction to foreign exchange forwards and swaps

Market terminology

Covered interest arbitrage

Forward and swap quotations

Using forwards to manage FX risk

Interest rate arbitrage

Non-deliverable forwards

☰ calculating FX forward prices

Given a series of market rates delegates will calculate theoretical forward and swap prices and then identify any arbitrage potential.

Lesson 3: Equity Markets

Equity market overview

Types of equity products

Equity indexes

Equity issuing procedures

Share buybacks versus dividends

Traditional versus electronic markets

☰ Equity trading simulation

Delegates will participate in an equity trading simulation where they will need to trade a small number of shares, responding to market news.

Lesson 4: Trading in Equities

Equity investment

Stock Beta and the quest for Alpha

Equity trading strategies

Prime brokerage

Different types of market orders

Evolving equity market execution

☰ Relative value trading in equities

Delegates will analyse a number of shares and look to establish relative value positions using stock Beta's to improve hedging ratio's.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 4: The Commodity Markets

Lesson 1: The Commodity Markets

Overview of commodity markets
Commodity characteristics and sectors
Explaining the renewed global interest
Key features and types of commodity markets
The growing role of China
Commodity indexes
Investing in commodities
☰ Commodity interdependence

Delegates will investigate the degree of interdependence between a number of commodity markets and identify potential consequences.

Lesson 2: Base and Precious Metals

Overview of the metal markets
Metal price drivers
Trading in the key base metals
Understanding the role and function of the LME
Overview of precious metals
The role of central banks and investment demand
Metal forward curves
☰ Trading the Contango

Delegates will analyse physical metal spot and forward prices and identify any Contango trading opportunities that may exist.

Lesson 3: The Energy Sector

Overview of energy markets
How energy markets differ from conventional markets
The price impact of supply and demand and news flow
Crude oil and refined products
The growing role of natural gas
Trading in electricity
☰ Energy trading workshop

Delegates will complete a number of activities investigating energy market trading features including the crack spread and gas and power contract details.

Lesson 4: Agricultural and Exotic Commodities

Overview of other commodity markets
Price drivers in agricultural commodities
Review of the grains and softs
Overview of emissions trading
Wind and renewables
☰ Commodity trading simulation

Delegates will participate in a metal trading simulation where they will need to trade a small number of markets, responding to market news.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 5: Forwards and Futures Markets

Lesson 1: Forward Pricing

The principle of a forward price

Cash and carry pricing

Theoretical versus actual forward prices

Forward curve shapes

Hedging using forwards

Arbitrage possibilities and limitations

☰ Calculating theoretical forward prices

Delegates will calculate theoretical forward prices for both interest rate and commodity markets and identify any arbitrage potential.

Lesson 2: Introduction to Futures

Background of futures trading

Key definitions and features

Types of futures contracts

Comparing futures and forward contracts

Margining and the role of the clearing house

Closing out positions

Futures applications

☰ Analysing futures contracts

Delegates will analyse a number of futures contract specifications and learn to identify the key features that will impact upon its applications.

Lesson 3: STIR Futures

Introduction to STIR futures

Key contracts and their specifications

Quoting STIR futures

Contract basis and convergence

Hedging using STIR futures

Trading strategies

☰ Hedging and trading with STIR futures

Delegates will develop interest rate hedging strategies using STIR futures and also use spread trades to implement yield curve trading strategies.

Lesson 4: Bond Futures

Introduction to bond futures

Key contracts and their specifications

Quoting bond futures

Bond futures conversion factors

Cash and carry pricing

Hedging with bond futures

☰ Hedging with bond futures

Delegates will calculate the appropriate hedge for a small bond portfolio and then test its effectiveness after a large movement in yields.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 6: Fundamentals of Swaps and FRA's

Lesson 1: Forwards Rate Agreements

Introduction to Forward rate agreements
Quotations conventions
Pricing from cash markets
Pricing using STIR futures
Hedging using FRA's
FRA trading strategies
☰ FRA pricing workshop

Delegates will calculate theoretical FRA prices using both cash and futures prices and identify an appropriate STIR futures hedge.

Lesson 2: Introduction to Swaps

Introduction to swaps
Overview of the swap market
Features of an interest rate swap
Swap market quotations
Market conventions
Uses and users of interest rate swaps
Swap applications
☰ Interest rate swap applications

Delegates will apply interest rate swaps to a number of client scenario's to develop suitable hedging strategies and then identify the resulting cash flows.

Lesson 3: Principles of Swap Pricing

Swap pricing principles
Building a zero coupon curve
Understanding discount factors
Linking discount factors and forward rates
Building the discount function
Valuing standard and non-standard swaps
☰ Valuing interest rate swaps

Delegates will build an Excel based swap pricing spreadsheet and then use it to price and value standard and non-standard interest rate swaps.

Lesson 4: Other Types of Swaps

Zero coupon swaps
Overnight index swaps
LIBOR-OIS spread
Cross currency swaps
Inflation swaps
Equity swaps
☰ exotic swap workshop

Delegates will identify and calculate the cash flows that take place on a number of swap products including OIS, inflation swaps and equity swaps.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 7: Options Part 1

Lesson 1: Introduction to Options

Introduction to options
Option market terminology
Calls versus puts on exercise
Option pay-off diagrams
Intrinsic versus Time Value
American versus European options
☰ Intrinsic versus time value

Delegates will split option prices into their intrinsic and time value components and then focus on the shape of the intrinsic value curve.

Lesson 2: Principles of Option Pricing

Option pricing variables
Principles of option pricing
Option pricing models
The Black Scholes pricing model
Binomial and Monte Carlo pricing techniques
Put-Call Parity
☰ Option pricing workshop

Delegates will price options using both an Excel based Black-Scholes model and also pricing intuitively using the straddle technique.

Lesson 3: Option Risk

Overview of option risks
The Greeks
Understanding Delta and Gamma
How time influences option prices
Vega and Rho
Volatility analysis in depth
☰ Applying the Greeks

Delegates will estimate the change in valuation for an option position using the Greeks and then compare this to the actual change in value.

Lesson 4: Option Trading Strategies

Introduction to option applications
Basic option trading
Combining options
Call and put spreads
Straddles and strangles
Hedging using options
☰ Option hedging strategies

In teams delegates will use options to design a client hedging solution and then present their strategy back to the class.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 8: Options Part 2

Lesson 1: More on Option Trading

- Expiry targeted trades
- Option ratio spreads
- Capturing Gamma
- The gamma-theta trade off
- Option market terminology
- ☰ Option trading strategies

Delegates will analyse the implied volatility of a series of option prices and then use them to build trading strategies aimed at specific market outcomes.

Lesson 2: FX and Other Types of Options

- Foreign Exchange options
- Interest rate caps and floors
- Bond options
- Swaptions
- Cancellable and extendible swaps
- Short term options
- ☰ Pricing an interest rate cap

Delegates will calculate prices for a number of interest rate caps and investigate the key influences on prices.

Lesson 3: Exotic Options Part 1

- Overview of exotic options
- Path dependent options
- Barrier options
- Average rate options
- Look-back options
- Chooser and compound options
- ☰ Pricing barrier options

Delegates will price a series of barrier options using a spread sheet based model and then investigate relationships between the prices.

Lesson 4: Exotic Options Part 2

- Digital options
- Digital option applications
- Ladder and ratchet options
- Multivariate options
- Overview of structured products
- Exotic options in structured products
- ☰ Exotic option checklist

The class will discuss the potential dangers of using exotic options and build a checklist of questions that need to be addressed before trading.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 9: Credit Derivatives

Lesson 1: Introduction to Credit Derivatives

Introduction to credit derivatives
Separating credit and market risk
Types of credit derivatives
Credit derivative market overview
Users and uses of credit derivatives
Current issues in credit derivatives
☰ Transferring risk with credit derivatives

Delegates will investigate how assets can be broken into market risk and credit risk components and how each of these can be managed separately.

Lesson 2: Single Name Credit Default Swaps

Introduction to Credit Default Swaps
Key features and terminology
CDS market overview
Credit events
The auction settlement process
Markit, DTCC and Current issues with CDS
☰ Calculating cash flows on CDS transactions

Delegates will identify and calculate the cash flows that take place under a CDS transaction in both default and non default scenario's.

Lesson 3: Using Credit Derivatives

Introduction to credit derivative applications
Users of credit derivatives
Managing credit risk with CDS
Directional credit trading
Relative value trade strategies
Arbitrage and curve trading strategies
☰ Trading strategies with credit derivatives

Delegates will establish directional and relative value trade positions using CDS and calculate cash flows and mark to market valuations.

Lesson 4: Credit Derivative Index Products

Reviewing credit derivative indexes
The CDX and iTraxx index series
Index mechanics
Dealing with defaults on an index trade
Directional and relative value trading using index products
☰ Trading credit derivative index products

Delegates will evaluate credit derivative index trade and look at establishing a relative value trade against single name components of the index.

10 Day Graduate Program

A Digital Learning Environment (DLE) online training program

Module 10: Financial Accounting, Banking Regulations

Lesson 1: Financial Accounting

Overview of accounting for financial products

Classifying assets and liabilities

IAS 39 and IFRS 9

Principles of fair value accounting

Accounting treatment of derivatives

Principles of hedge accounting

📖 Reading financial statements

Delegates will learn to identify the key disclosures in financial statements and also learn to assess proposed client hedging transactions for potential accounting pitfalls.

Lesson 2: Banking Regulations

Overview of Regulatory capital

Changes under Basel III

Understanding risk weighted assets

The principles of Value at Risk

The implications of Dodd-Frank

Current stories in banking regulations

📖 Current story discussion

Delegates will examine a number of current banking regulation related stories and the class will discuss the possible implications for different areas of the bank and products traded.

Final Exam and Final Project Presentations (Flipped Classroom)

Lesson 3: Final Exam

Delegates will sit a final exam covering the content covered through the program.

Lesson 4: Final Project Presentations

Groups will present their final projects to



CapitalWave Inc. is a firm made up of industry professionals having a reputation for providing first-rate training and consultancy to institutions in the capital and wealth markets. CapitalWave offers instructors and programs who have extensive knowledge, experience and expertise in the areas of banking and finance.

Blended learning is the philosophy on which the company was founded. Our training methodology, integrating theory with practice using our own very powerful training tools, creates a uniquely exciting and effective learning environment. The result pays immediate dividends in the retention of newly-learned concepts and their practical application in the financial marketplace.

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