

VICTORIA INTERNATIONAL APPLIED FINANCE PROGRAMME
School of Economics and Finance

MMAF514 DERIVATIVES

Trimester 2, 2014

COURSE OUTLINE

Names and Contact Details

The course lecturer is Hai Lin.
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Office Hours: by appointment

The administrator for this course is Rachel Zhang.
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Trimester Dates

The study and assessment period is Monday 14 July – Sunday 26 October.

Block Release Times:
9.00 am 29th – 1pm 31st August
9.00 am October 24th – 1pm 26th October

Withdrawal from Course

1. Your fees will be refunded if you withdraw from this course on or before Friday 25th July 2014.
2. The standard last date for withdrawal from this course is Friday 26th September. After this date, students forced to withdraw by circumstances beyond their control must apply for permission on an '*Application for Associate Dean's Permission to Withdraw Late*' including supporting documentation. The application form is available from either of the Faculty's Student Customer Service Desks.

Block Release Times and Room Numbers

Block Release One: 9.00 am 29th – 1pm 31st August
Lecture Location: **MY632**
Lab Location: **KK216**

Block Release Two: 9.00 am October 24th – 1pm 26th October
Lecture Location: **MY632**
Lab Location: KK216
Test Location: MY631/632

Course Delivery

The contact hours of the course will be during the two block releases detailed above. During the rest of the trimester, students will be expected to be engaged in self-directed study using their textbooks and material posted on Blackboard, and completing assignments which will be posted on Blackboard. **Attendance at all sessions of both block releases is compulsory.**

Group Work

There is no group work outside of the block release.

Expected Workload

The expected workload for the average student is 200 hours. During the approximately 6 weeks of term prior to each block release, students will need to allow about 14 hours per week for study, research and preparation of assignments for this course. The two block courses each involve approximately 18 hours of work.

Prescription

Forwards and futures, options, synthetics, exotics and associated products. Pricing from the first principles and from no arbitrage methodology. Use in portfolio hedging and in open position taking. Contexts covered include equity, fixed interest, commodity and foreign exchange. Trading conventions and techniques

Course Learning Objectives

On completion of the course, students should:

- C1. understand the main derivatives that are traded in the financial market, such as forward, futures, swaps and options.
- C2. use diagram to analyse the possible payoff of derivatives
- C3. apply no arbitrage theory in the pricing of derivatives
- C4. use binomial tree and Black-Scholes option pricing formula to price the options.
- C5. apply the derivatives in risk management

Course Content

Block Release I: Futures, Forwards and Swaps

- Introduction
- No arbitrage
- Term structure of interest rates
- Futures and forwards
- Determination of futures and forward price
- Swaps

Block Release II: Options

- Option market and trading strategy
- Property of option price
- Binomial tree
- Black-Scholes option pricing model
- Greek letters
- Exotic options and other nonstandard derivatives

Readings

The lecture notes will be provided on blackboard. These lecture notes and any supplementary material distributed at the block releases constitute the examinable material for the course. The reference is also made to the following text, which is provided as part of the course material:

- Hull, J. C., 2014. Fundamentals of Futures and Options Market (International edition). Pearson publisher.

You will not be examined on material appearing in Hull's book unless it also appears in the lecture notes. The references to Hull's book are designed to help you understand parts of the lecture notes, and to provide you with some information on the mechanics of derivative markets.

Materials and Equipment

It is not necessary to bring a calculator to the block courses. You should also have access to Excel from Microsoft Office (this is available in the student labs on campus). During tests students will be allowed to use calculators, but not hand held or other computers. A good financial calculator such as the HP17BII or HP10BII is recommended.

Assessment

From Trimester 1, 2014, a revised Assessment Handbook will apply to all VUW courses: see <http://www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf>.

In particular, there will be a new grade scheme, in which the A+ range will be 90-100% and 50-54% will be a C-.

- One 120 minute test at each block release session (each worth 35%) based on reading assigned for the period leading up to the block release and material presented at the block release. Please bring your calculator.
- Two assignments, first worth 12% and second worth 18%. The Scheduled due dates for the assignments are
 - 4 pm, Monday, September 15
 - 4 pm, Monday, November 10
- All learning objectives will be assessed by each assessment item

Penalties

Each of the assignments will be marked out of a maximum that diminishes by 5% for every day late. Please note that the weekend no longer counts as one day (i.e. if an assignment is due by 4pm Friday and you hand it in 3pm Sunday, you will be penalized for 2 days). Please carefully read the assignment guidelines for details of how assignments should be submitted. There will be a final cut-off date, one week after the due date for each assignment, after which no assignment can be accepted.

Use of Turnitin

Student work provided for assessment in this course may be checked for academic integrity by the electronic search engine <http://www.turnitin.com>. Turnitin is an on-line plagiarism prevention tool which compares submitted work with a very large database of existing material. At the discretion of the Head of School, handwritten work may be copy-typed by the School and submitted to Turnitin. A copy of submitted materials will be retained on behalf of the University for detection of future plagiarism, but access to the full text of submissions will not be made available to any other party.

Mandatory Course Requirements

Attendance at all sessions of both block releases is compulsory.

If you have, or become aware of, any health condition that could prevent your attending a VIAF compulsory block release, then you should notify the Programme Director immediately, preferably by email dawn.lorimer@vuw.ac.nz and copy the email to viaf.programme@vuw.ac.nz

If you cannot complete an assignment or sit a test or examination, refer to www.victoria.ac.nz/home/study/exams-and-assessments/aegrotat

Communication of Additional Information

Course documents and other information will be available on the course website at <http://blackboard.vuw.ac.nz>. Announcements will also be posted there.

Student feedback

Student feedback on University courses may be found at www.cad.vuw.ac.nz/feedback/feedback_display.php

Link to general information

For general information about course-related matters, go to <http://www.victoria.ac.nz/vbs/studenthelp/general-course-information>

Note to Students

Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning objectives as required for accreditation and academic audit. The findings may be used to inform changes aimed at improving the quality of VBS programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.
