TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI
VICTORIA
UNIVERSITY OF WELLINGTON

VICTORIA APPLIED FINANCE PROGRAMME
School of Economics and Finance

MMAF514 DERIVATIVES

Trimester 1, 2016

COURSE OUTLINE

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 be able to:

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

The lectures are tailored to include discussions about events that happen in derivatives markets. The lectures contain a lab component. Case studies are used in the tutorials. Assignment 2 is a project.
The content and timing of the course might differ slightly from the information given in the following table

Week	Topic	Chapters	Test	Assignment		Tutorials
				Set	Submitted	
1	Introduction and no arbitrage	1				
2	Futures (1)	2		1		T
3	Futures (2)	3				T
4	Forward and futures pricing	5				T
	Easter break					
5	Swap	7			1	T
6	Options Market (1)	9, 10				T
7	**Test 1 (Self-study:16:40-17:20; Test: 17:30-19:30)**					
	Term break					
8	Options Market (2, 3)	10, 11, 22, 24		2		
9	Binomial Tree	12, 18				T
10	Black-Scholes Model	13, 19				T
11	Greek Letters	17			2	T
12	**Test 2 (Self study:16:40-17:20; Test: 17:30-19:30)**					

Trimester Dates

Teaching Period: Monday 29th February – Friday 3rd June
Study Period: Monday 6th June – Thursday 9th June
Examination Period: Friday 10th June – Wednesday 29th June (inclusive)

Withdrawal from Course

1. Your fees will be refunded if you withdraw from this course on or before Friday 11th March 2016.

2. The standard last date for withdrawal from this course is Friday 13th May.. 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 or online.

Names and Contact Details

Course Coordinator & Lecturer	Hai Lin hai.lin@vuw.ac.nz Office Hours: by appointment.	RWW216	463 5239
Course Administrator	Rachel Zhang rachel.zhang@vuw.ac.nz Office Hours: Monday-Friday 9am-midday and 1-3pm	RWW120	463 6148

Class Times and Room Numbers

Lectures: Tuesdays 16:40 -19:30 (16:40 -18:30 if there is a tutorial) in RWW413;
Tutorials/Labs : Tuesdays 18:40 -19:30 in RWW202

Course Delivery

The course will be delivered by one two-hour lecture per week.

Readings

The lecture notes will be provided on blackboard. These lecture notes and any supplementary material distributed during the lectures 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 market.
Examples of advanced readings are:

- Hull, J. C., 2012. Options, Futures and Other Derivatives (8th edition), Pearson publisher.
- Jarrow, R.A., Chatterjea, A., An Introduction to Derivative Securities, Financial Markets, and Risk Management, W.W. Norton & Company Inc.

Mandatory course requirements

Attendance at all lectures and tutorials is compulsory.
If you have, or become aware of, any health condition that could prevent your attending a course, then you should notify the Programme Director immediately, preferably by email maf.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

Expected Workload

This course is a 20-point course. One point is equated to 10 hours of work, which means a total of 200 hours is expected for this course, spread over the 12 teaching weeks and break. This involves attending the lectures and tutorials every week, completing all assignments, and preparations for all tests.

Assessment

The Assessment Handbook will apply to all VUW courses: see
http://www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf.

Assessment Requirements

- 12% assignment 1 (CLO 1, 2, 3, 4, 5)
- 18% assignment 2 (Project) (CLO 1, 2, 3, 4, 5)
- 35% Test 1 to be held in week 7 (CLO 1, 2, 3, 4, 5)
- 35% Test 2 to be held in week 12 (CLO1, 2, 3, 4, 5)

Assignments will usually be posted on Friday, to be submitted via Blackboard or course administrator no later than 4 p.m. on the Friday four weeks later. Late assignments will not be accepted. Answers will be posted on the blackboard.

Assignments that appear to be copied will be marked as zero. Appeals on assignment marking may be made to the coordinator, associate professor Hai Lin (Hai.lin@vuw.ac.nz).

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.

Materials and Equipment

It is not necessary to bring a calculator to the lectures or tutorials. 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.

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

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.

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.

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