

VICTORIA INTERNATIONAL APPLIED FINANCE PROGRAMME
School of Economics and Finance

MMAF514 Derivatives

Trimester One 2007

COURSE OUTLINE

Contact Details

The course coordinator, Professor Graeme Guthrie, is located in Room 326 of Rutherford House and can be reached by email at graeme.guthrie@vuw.ac.nz.

Block Release Times

Attendance at all sessions for both block releases is compulsory.

- The first block release runs from Tuesday 17th April to the morning of Thursday, 19th April, inclusive. It covers Part I of the lecture notes.
- The second block release runs from Tuesday 12th June to the morning of Thursday 14th June, inclusive. It covers Part II of the lecture notes.

Course Objectives

To develop the building blocks required to hedge and price derivative securities. To develop the adjustments needed to handle different underlying assets, as well as the specifics of different instruments. To develop the adjustments needed to handle standard features of many derivatives.

Course Content

Part I: Fundamentals of derivative pricing

- Building blocks
- Modelling stock prices
- Binomial option pricing model
- Dividends
- Early exercise
- Futures and options on futures

Part II: Interest rate derivatives

- Uncertain interest rates
- Term structure of interest rates
- Fitting the yield curve
- Interest rate derivatives

Expected Workload

Total average workload of 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.

Textbooks

Comprehensive lecture notes will be provided. These lecture notes constitute the examinable material for the course. While reading more widely may potentially help you in the tests, everything you will need to answer the test questions will be contained in these lecture notes and any supplementary material distributed at the block releases. However, reference will also be made to the following text, which is provided as part of the course material:

- Hull, John C. (2005). *Fundamentals of Futures and Options Markets* (5th edn.). Upper Saddle River, New Jersey: Prentice Hall.

It must be stressed that it is the lecture notes which comprise the examinable material for the course. You will not be examined on material appearing in Hull's book — unless, of course, 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.

If you would like a (relatively) non-technical break from the course, the following books are excellent.

- Dunbar, Nicholas (2001). *Inventing Money: The Story of Long-Term Capital Management and the Legends Behind it*. Chichester: John Wiley and Sons Ltd.
- Lowenstein, Roger (2001). *When Genius Failed: The Rise and Fall of Long-Term Capital Management*. London: Fourth Estate.

They offer insights into the real-world uses and abuses of the derivative pricing models we present in MMAF 514. They are not a formal part of the course, and are therefore not examinable.

Materials and Equipment

A calculator will be essential for the tests.

Assessment Requirements

There are four pieces of assessment in this course.

- Test 1 35% At the conclusion of the first block release
- Assignment 1 15% Due Wednesday 9th May
- Test 2 35% At the conclusion of the second block release
- Assignment 2 15% Due Wednesday 27th June

Each test will be based on reading assigned for the period leading up to the block release and material presented at the block release.

Penalties

Each of the assignments will be marked out of a maximum that diminishes by 5% for every day late, with a weekend counting as one day. The date of submission shall be taken as the date of delivery or the day of postmark, if by post. There will be a final cut off date, one week after the due date for each assignment, after which no assignment can be accepted.

The assignments will each carry a specified word limit. If an assignment exceeds the word limit, credit will be given only from the beginning of the assignment up to the word limit. No credit will be given for the portion of work extending beyond the word limit.

Mandatory Course Requirements

To pass, a student must: (i) attend all sessions of both block release courses; (ii) obtain an average mark of at least 50% over total course assessment; (iii) obtain an average mark of at least 50% over the two tests.

Communication of Additional Information

Additional information including assignment questions, details of the block course schedule, feedback on course assessments, etc will be provided by email or by post. Students are responsible for ensuring that the VIAF Programme Senior Administrator, Bun Wong, has their up to date email and postal addresses.

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

Faculty of Commerce and Administration Offices

Railway West Wing (RWW) - FCA Student and Academic Services Office

The Faculty's Student and Academic Services Office is located on the ground and first floors of the Railway West Wing. The ground floor counter is the first point of contact for general enquiries and FCA forms. Student Administration Advisers are available to discuss course status and give further advice about FCA qualifications. To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

Easterfield (EA) - FCA/Education/Law Kelburn Office

The Kelburn Campus Office for the Faculties of Commerce and Administration, Education and Law is situated in the Easterfield Building - it includes the ground floor reception desk (EA005) and offices 125a to 131 (Level 1). The office is available for the following:

- Duty tutors for student contact and advice.
- Information concerning administrative and academic matters.
- Forms for FCA Student and Academic Services (e.g. application for academic transcripts, requests for degree audit, COP requests).
- Examinations-related information during the examination period.

To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

General University Policies and Statutes

Students should familiarise themselves with the University's policies and statutes, particularly the Assessment Statute, the Personal Courses of Study Statute, the Statute on Student Conduct and any statutes relating to the particular qualifications being studied; see the Victoria University Calendar or go to www.vuw.ac.nz/policy.

Student and Staff Conduct

The Statute on Student Conduct together with the Policy on Staff Conduct ensure that members of the University community are able to work, learn, study and participate in the academic and social aspects of the University's life in an atmosphere of safety and respect. The Statute on Student Conduct contains information on what conduct is prohibited and what steps are to be taken if there is a complaint. For information about complaint procedures under the Statute on Student Conduct, contact the Facilitator and Disputes Advisor or refer to the statute on the VUW policy website at www.vuw.ac.nz/policy/studentconduct. The Policy on Staff Conduct can be found on the VUW website at www.vuw.ac.nz/policy/staffconduct.

Academic Grievances

If you have any academic problems with your course you should talk to the tutor or lecturer concerned; class representatives may be able to help you in this. If you are not satisfied with the result of that meeting, see the Head of School or the relevant Associate Dean; VUWSA Education Coordinators are available to assist in this process. If, after trying the above channels, you are still unsatisfied, formal grievance procedures can be invoked. These are set out in the Academic Grievances Policy which is published on the VUW website at www.vuw.ac.nz/policy/academicgrievances.

Academic Integrity and Plagiarism

Academic integrity is about honesty – put simply it means **no cheating**. All members of the University community are responsible for upholding academic integrity, which means staff and students are expected to behave honestly, fairly and with respect for others at all times.

Plagiarism is a form of cheating which undermines academic integrity. The University defines plagiarism as follows:

The presentation of the work of another person or other persons as if it were one's own, whether intended or not. This includes published or unpublished work, material on the Internet and the work of other student or staff.

It is still plagiarism even if you re-structure the material or present it in your own style or words.

Note: It is however, perfectly acceptable to include the work of others as long as that is acknowledged by appropriate referencing.

Plagiarism is prohibited at Victoria and is not worth the risk. Any enrolled student found guilty of plagiarism will be subject to disciplinary procedures under the Statute on Student Conduct and may be penalised severely. Consequences of being found guilty of plagiarism can include:

- an oral or written warning
- cancellation of your mark for an assessment or a fail grade for the course
- suspension from the course or the University.

Find out more about plagiarism, and how to avoid it, on the University's website at www.vuw.ac.nz/home/studying/plagiarism.html.

Notice of Turnitin Use

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 identifies material that may have been copied from other sources including the Internet, books, journals, periodicals or the work of other students. Turnitin is used to assist academic staff in detecting misreferencing, misquotation, and the inclusion of unattributed material, which may be forms of cheating or plagiarism. At the discretion of the Head of School, handwritten work may be copy typed by the School and subject to checking by Turnitin. You are strongly advised to check with your tutor or the course coordinator if you are uncertain about how to use and cite material from other sources. Turnitin will retain a copy of submitted materials 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.

Students with Impairments

The University has a policy of reasonable accommodation of the needs of students with disabilities. The policy aims to give students with disabilities the same opportunity as other students to demonstrate their abilities. If you have a disability, impairment or chronic medical condition (temporary, permanent or recurring) that may impact on your ability to participate, learn and/or achieve in lectures and tutorials or in meeting the course requirements, please contact the Course Coordinator as early in the course as possible. Alternatively you may wish to approach a Student Adviser from Disability Support Services (DSS) to discuss your individual needs and the available options and support on a confidential basis. DSS are located on Level 1, Robert Stout Building, telephone (04) 463 6070, email disability@vuw.ac.nz. The name of your School's Disability Liaison Person is in the relevant prospectus or can be obtained from the School Office or DSS.

Student Support

Staff at Victoria want students to have positive learning experiences at the University. Each Faculty has a designated staff member who can either help you directly if your academic progress is causing you concern, or quickly put you in contact with someone who can. Assistance for specific groups is also available from the Kaiwawao Māori, Manaaki Pihipihinga or Victoria International.

In addition, the Student Services Group (email student-services@vuw.ac.nz) is available to provide a variety of support and services. Find out more at www.vuw.ac.nz/st_services/.

VUWSA employs Education Coordinators who deal with academic problems and provide support, advice and advocacy services, as well as organising class representatives and Faculty delegates. The Education Office (tel. 04 463 6983 or 04 463 6984, email education@vuwsa.org.nz) is located on the ground floor, Student Union Building.

Manaaki Pihipihinga Programme

Manaaki Pihipihinga is an academic mentoring programme for undergraduate Māori and Pacific students in the Faculties of Commerce and Administration, and Humanities and Social Sciences. Sessions are held at the Kelburn and Pipitea Campuses in the Mentoring Rooms, 14 Kelburn Parade (back courtyard), Room 109D, and Room 210, Level 2, Railway West Wing. There is also a Pacific Support Coordinator who assists Pacific students by linking them to the services and support they need while studying at Victoria. Another feature of the programme

is a support network for Postgraduate students with links to Postgraduate workshops and activities around Campus.

For further information, or to register with the programme, email manaaki-pihipihinga-programme@vuw.ac.nz or phone (04) 463 5233 ext. 8977. To contact the Pacific Support