

School of Economics and Finance

**MMAF 533 ST: FINANCIAL ENGINEERING
AND RISK MANAGEMENT**

Trimester 1, 2007

COURSE OUTLINE

Coordinator/Lecturer Leigh Roberts, RH 323, phone 463-5937
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Lecture times Monday 12.40 - 2.30, GB G04

Tutorial times TBA

Course Objectives

To study the institutional framework for financial risk management in general, and financial engineering and credit risk in particular.

To develop skills in financial mathematics and apply those skills to credit risk analysis and modelling. To develop more advanced quantitative skills in order to explore the current financial engineering and credit risk literature.

To realise the potential of, as well as the limitations of, quantitative models and methodologies in dealing with credit risk.

Course Content

The course is divided into three main parts, viz.:

- Institutional framework (2 weeks);
- Mathematical background (3 weeks); and
- Credit risk models (7 weeks)

There is substantial overlap between the three parts. The teaching sequence does not necessarily follow this order; and the timing shown is only approximate.

Expected Workload

It is expected that the course will require approximately 200 hours of work, including class time.

Readings

Notes and readings will be made available, generally on Blackboard although sometimes in class.

It is *not* recommended that you purchase any text books for this course. Books which may be useful for parts of the course, however, include:

- A. J. McNeil, R. Frey and P. Embrechts (2005), *Quantitative Risk Management*. Princeton University Press.
- P. J. Schönbucher (2003), *Credit derivatives pricing models*. Wiley.
- C. L. Culp (2002), *The ART of Risk Management*. Wiley.

You can find Blackboard at <http://www.blackboard.vuw.ac.nz/>

The VUW library has a web page that contains detailed information about available library resources and has links to several other sites. Its URL is <http://www.vuw.ac.nz/library>

Assessment

- 20% Average of the fortnightly assignment marks
- 30% Test, normally held in a (double) lecture time-slot in the second half of the course.
- 50% Two hour final examination, in the examination period 4 June - 1 July 2007

Mandatory course requirements

In order to pass the course, it is necessary to obtain at least 40% in each of the test and the two hour final examination.

Communication

Additional information or information on changes will be posted on Blackboard. Some information may be emailed to you via your SCS address, so check this regularly.

SUPPLEMENTARY INFORMATION

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 <http://www.vuw.ac.nz/policy>.

For information on the following topics, go to the Faculty's website <http://www.vuw.ac.nz/fca>

- Academic Grievances
- Academic Integrity and Plagiarism
- Student and Staff Conduct
- Meeting the Needs of Students with Impairments
- Student Support

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, phone (04) 463 5233 ext. 8977 or email manaaki-pihipihinga-programme@vuw.ac.nz. To contact the Pacific Support Coordinator, phone (04) 463 5842 or email pacific-support-coord@vuw.ac.nz.