



School of Economics and Finance

QUAN 371 FINANCIAL MATHEMATICS

Trimester 1, 2009

COURSE OUTLINE

Lecturer Leigh Roberts, RH 323, phone 463-5937 (coordinator)
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Administrator Suzanne Freear, RH 327, phone 463-5380
email: suzanne.freear@vuw.ac.nz

Lecture times Monday, Thursday, Friday 8.30 - 9.20, GBLT4

Tutorial times Wednesday, Thursday 11.30 - 12.20, RHMZ 04

Students are not required to sign up for particular tutorials.

The coordinator prefers to be contacted by email or in the tutorials; in addition he is generally unavailable on Tuesdays.

Dates

Trimester 1 starts on Monday 2 March 2009, and the exam period finishes on 1 July 2009.

Withdrawal from the course

Information on withdrawal from the course can be found in
<http://www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx>

Course Learning Objectives

By the end of this course, students should be able to:

comprehend and articulate financial mathematical representation of finance theories;

apply financial mathematics to the pricing and evaluation of insurance and derivative securities;

utilise financial mathematics to analyse credit risk, forwards, swaps and options;

analyse the application of financial mathematics to evolving financial markets in modern economics.

Course Content

The content and timing of the course may differ slightly from the information given in the following approximate timetable.

Date	Week	Topic	Notes Chs.	Test	Assignments set	submitted
2-6 March	1	Elementary: $i, i^{(2)}, d, d^{(2)}, \delta$	1,2		1	
9-13 March	2	Annuities: $a_{\bar{n} }, s_{\bar{n} }$	3		2	1
16-20 March	3	Loans	4		3	2
23-27 March	4	Accrued interest, duration			4	3
30 Mar-3 Apr	5	Duration, immunisation				4
6-10 April	6	Life table		T1	5	
<i>Mid trimester break, 2 weeks 13-24 April 2009</i>						
27Apr-1 May	7	Life table, derivative securities			6	5
4-8 May	8	Forwards, swaps			7	6
11-15 May	9	Swaps, options			8	7
18-22 May	10	Options, lognormal distn			9	8
25-29 May	11	Lognormal distribution		T2		
1-5 June	12	Revision				9

Note that there will be only two lectures in week 6, because of the public holiday on Good Friday, 10 April. Tests will be held during a lecture time (50 minutes) in the weeks indicated, with the decision as to the test dates taken in consultation with the class.

Expected Workload

It is expected that the course will require approximately 150 hours of work, including class time.

Readings

It is not recommended that you purchase any books for this course. Notes will be made available on Blackboard: <http://www.blackboard.vuw.ac.nz/>

Assessment

- 10% Average of the weekly assignment marks
- 25% Test 1, held in a lecture time-slot in week 6
- 25% Test 2, held in a lecture time-slot in week 11
- 40% Two hour final examination, in the examination period 12 June - 1 July 2009

Assignments will be set each week at the Monday lecture, normally to be handed in to Box 30 in the Mezzanine floor in Rutherford House no later than 5 p.m. on the Wednesday in the week following.

Answers to the assignments will normally be posted on blackboard on the evening of the day on which the assignments are due, so that late assignments will not normally be accepted.

Assignments appearing to be copied will be marked as zero. Appeals on assignment marking may be made to the coordinator in the first instance.

Examinations

Students who enrol in courses with examinations are obliged to attend an examination at the university at the required time during the formal examination period.

Examination dates for trimester 1 are from Friday 12 June to Wednesday 1 July 2009 inclusive.

Mandatory course requirements

Attendance at both tests and the final examination is compulsory. A minimum mark of 40% is required in the final exam for a pass in the course.

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 on the ground floor (EA 005). This counter is the first point of contact for:

- 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
- Student and Staff Conduct
- Meeting the Needs of Students with Impairments
- Student Support

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:
<http://www.vuw.ac.nz/home/studying/plagiarism.html>.

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) 4636015. To contact the Pacific Support Coordinator, email pacific-support-coord@vuw.ac.nz or phone (04) 463 5842.