

COURSE OUTLINE

FINM/QUAN 371 Financial Mathematics 24 points

School of Economics and Finance 1/3 2006

Staff Dr Leigh Roberts, RH323, phone 463-5937 (coordinator/lecturer)
 email: leigh.roberts@vuw.ac.nz FAX: 463 5014

Dr Helen Huang, RH329, phone 463-6918 (lecturer)
 email: helen.huang@vuw.ac.nz FAX: 463 5014

Lectures Tuesday, Wednesday, Thursday 9.30 - 10.20 GB LT3

Tutorials Tuesday, Wednesday, Thursday 10.30 - 11.20 RWW 126

The coordinator prefers to be contacted by email or through the tutorials, and is in any case unavailable on Mondays and Fridays.

Objectives

To be introduced to the principal ideas underpinning the mathematics of finance, and to gain some experience of the application of these ideas to the financial and business worlds. To be introduced to the principles of risk management, insurance and derivative securities.

Course content

The content and timing of the course are approximately as follows.

Teacher	Week	Topic	Notes Chs.	Test	Assignments set submitted
Leigh Roberts	1	Elementary: $i, i^{(2)}, d, d^{(2)}, \delta$	1,2		1
	2	Annuities: $a_{\overline{n} }, s_{\overline{n} }$	3		2 1
	3	Loans	4		3 2
	4	Accrued interest, Rule of 78	5,6		4 3
Helen Huang	5	Real return	7		5 4
	6	Credit risk		T1	
<i>Mid trimester break, 2 weeks</i>					
	7	Derivative securities	13		6 5
	8	Options, forwards, swaps			7 6
	9	Duration, immunisation	9,10		8 7
	10	Revision		T2	
Leigh Roberts	11	Case studies			9 8
	12	Revision			9

Readings

Notes will be made available in Blackboard, usually as *pdf* files. It is *not* recommended that you purchase any books for this course.

Assessment

10%	Average of the weekly assignment marks
20%	Test 1, 50 minutes, held in a lecture time in week 6
20%	Test 2, 50 minutes, held in a lecture time in week 10
50%	Final 2 hour Registry exam in June, minimum mark of 40% required

Assignments will be set each week at the Tuesday lecture, normally to be handed in at the Thursday lecture in the following week, and to be returned marked at the Thursday lecture following. Solutions will normally be posted on Blackboard on the evening of the day in which the assignment is to be handed in, and assignments will not be accepted after solutions have been posted.

Assignments which seem to be copied will be marked at zero.

The dates of the tests within the specified weeks will be set in consultation with the class. It is likely that the first test will be set on the material covered in the first 4 assignments; and the second test on the material covered in assignments 5 to 7 inclusive. Material eligible to be tested in the terms' tests may be asked again in the final exam.

A minimum mark of 40% in the final exam is required for a pass in the course.

Social

A class dinner is normally held at the end of the course, before exams start.

Mandatory course requirements

Attendance at both tests and the 2 hour examination is compulsory. The mark in the final exam must exceed 40% for a pass to be gained in the course overall.

Communication of additional information

Course notices will generally be relayed in class, via email, and put into Blackboard. Other information is held by Sue Freear in RH327.

email: suzanne.freear@vuw.ac.nz telephone: 463 5380

General University policies and statutes

Students should familiarise themselves with the University's policies and statutes, particularly those regarding assessment and course of study requirements, and formal academic grievance procedures.

Student Conduct 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 can be taken if there is a complaint. For queries about complaint procedures under the Statute on Student Conduct, contact the Facilitator and Disputes Advisor. This Statute is available in the Faculty Student Administration Office or on the website at:

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

The policy on Staff Conduct can be found on the VUW website at:

<http://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 or, if you are not satisfied with the result of that meeting, see the Head of School or the Associate Dean (Students) of your Faculty. Class representatives are available to assist you with 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:

<http://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. Plagiarism is **prohibited** at Victoria.

The University defines plagiarism as follows: Plagiarism is presenting someone else's work as if it were your own, whether you mean to or not.

'Someone else's work' means anything that is not your own idea, even if it is presented in your own style. It includes material from books, journals or any other printed source, the work of other students or staff, information from the Internet, software programmes and other electronic material, designs and ideas. It also includes the organization or structuring of any such material.

Plagiarism is not worth the risk.

Any enrolled student found guilty of plagiarism will be subject to disciplinary procedures under the Statute on Student Conduct (www.vuw.ac.nz/policy/studentconduct) and may be penalized severely. Consequences of being found guilty of plagiarism can include:

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

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

Students with Disabilities

The University has a policy of reasonable accommodation of the needs of students with disabilities. The policy aims to give students with disabilities an equal opportunity with all 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, then 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 to confidentially discuss your individual needs and the options and support that are available. Disability Support Services are located on Level 1, Robert

Stout Building, or phoning 463-6070, email: disability@vuw.ac.nz. The name of your School's Disability Liaison Person can be obtained from the Administrative Assistant or the School Prospectus.

Student Support

Staff at Victoria want students' learning experiences at the University to be positive. If your academic progress is causing you concern, please contact the relevant Course Co-ordinator, or Associate Dean who will either help you directly or put you in contact with someone who can.

The Student Services Group is also available to provide a variety of support and services. Find out more at http://www.vuw.ac.nz/st_services/ or email student-services@vuw.ac.nz.

VUWSA employs two 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 is located on the ground floor, Student Union Building, phone 463 6983 or 463 6984, email education@vuwsa.org.nz.