

MACQUARIE
UNIVERSITY



FACULTY OF
BUSINESS AND ECONOMICS

ACST152
Introduction to Actuarial Studies

Semester 1, 2010

Actuarial Studies Department

**MACQUARIE UNIVERSITY
FACULTY OF BUSINESS AND ECONOMICS
UNIT OUTLINE**

Year and Semester:	Semester 1, 20010
Unit convenor:	Shauna Ferris
Prerequisites :	Admission to BCom in Actuarial Studies or 18 Credit Points with Grade Point Average 2.75

Students in this unit should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything in it is unclear, please consult one of the teaching staff in the unit.

ABOUT THIS UNIT

This unit provides an introduction to the important underlying aspects of actuarial work. We look at the development of actuarial techniques in the context of life insurance, general insurance, superannuation, and investment. The aim is to develop problem-solving skills and give students some of the basic tools for risk management and financial modelling. The units shows how studies in related disciplines (such as accounting, demography, economics, statistics, computing, and mathematics) are essential to the education of an actuary. The unit works through the control cycle approach to insurance: business objectives, product design, risk assessment, modelling of insurance and financial risks (including claim frequency and claim size of individual claims and on a portfolio basis), pricing, reserving, investment and asset liability matching, claims management, legal requirements, solvency, profitability, and responding to experience. Assessment is via assignments, a class test, and a final examination. This unit is relevant for students who want to become actuaries or risk managers. Students are assumed to have studied mathematics in high school up to at least HSC Extension 1 level (or equivalent from other states/countries) This subject is a prerequisite for more advanced units in the actuarial studies program.

TEACHING STAFF

- Convenor : Shauna Ferris. Contact by email at sferris@efs.mq.edu.au
Building E4A Room 617
- Tutors Pan Jiang contact via the BlackBoard Private Mail
Werner Fortmann contact via the Blackboard Private Mail
- Teaching Assistant Minh Phan contact via the Blackboard

If you have any questions about the general administration of this unit, please send them to Minh Phan via the Blackboard Private Mail. (We will show you how to use this in lectures).

Shauna Ferris will be available for consultation on Wednesday afternoon between 3 pm and 5 pm. If you need to see her at some other time, please send an email to make an appointment.

CLASSES

There is one two-hour lecture and one tutorial in each week.

Tuesday 11:00 to 1:00 in Price Theatre in Building W5A

There are six tutorial groups. If there is a good reason for changing tutorial groups, then you may send an email to Werner Fortmann to request a change (stating your reasons).

Group	Day	Time	Location	Tutor
Class_01	Fri	9	W6B315	Werner Fortman
Class_02	Fri	9	C5A232	Pan Jiang
Class_03	Fri	10	W6B315	Werner Fortman
Class_04	Fri	10	C5A232	Shauna Ferris
Class_05	Fri	12	C4A312	Shauna Ferris
Class_06	Fri	12	W5A105	Pan Jiang

To help you find your room, it is helpful to know that
Buildings on the East side of Campus are labelled E
Buildings on the West Side of Campus are labelled W
Buildings near the Centre of the campus are labelled C

The timetable for classes can be found on the University web site at: <http://www.timetables.mq.edu.au/>
This will allow you to print out times and locations for your classes.

iLectures

We will be recording the lectures (Audio only) using iLecture. When you look at the Blackboard, you can click on the iLecture icon to obtain access to the recordings. Note that we do NOT guarantee that the lectures will always be recorded – sometimes there are technical hitches. Therefore we recommend that you do NOT skip lectures in the expectation that you will be able to listen to the lectures later. This is a service for people who miss lectures due to unavoidable disruption of studies such as illness.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

There is no prescribed textbook for this unit.

Course notes and tutorial exercises and solutions will be posted on the Blackboard each week.

UNIT WEB PAGE

The web page for this unit can be found by going to learn.mq.edu.au and entering your user id and password. This will give you a list of all the units you are enrolled in this semester.

If you forget your password or have any technical problems accessing the website, then you can contact the help desk at 9850-4357 (9850-HELP) or by going to C5C244.

LEARNING OBJECTIVES

We will be adopting a problem-based learning approach. We will look at a range of typical actuarial problems, and learn some of the mathematical / statistical / computing / modelling skills which are needed to solve these problems. Since these are real-life problems, we will also be look at practical problems of business management – including ethical issues. The problems will be drawn from superannuation, life insurance, general insurance, banking, and other financial services.

Generic Skills

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students' generic skills in a range of areas. One of the aims of this unit is that students develop their skills in the following:

- Foundation skills of literacy, numeracy and information technology;
- Communication skills;
- Critical analysis skills;
- Problem-solving skills;
- Creative thinking skills.

TEACHING AND LEARNING STRATEGY

- The lecture will be taught by lectures and tutorials.
- The lecturers will present the course material in lectures, but we expect students to be active participants – asking questions, responding to questions from the lecturer, and working through some of the problems with “thought experiments”
- The tutorials will be small groups (about 25 students per group). You will be given tutorial questions each week, which you are expected to attempt BEFORE the tutorial. We encourage you to work in groups and help each other learn.
- All course material will be posted on the Blackboard, along with old tests and exams.
- Please use the discussion board to ask questions and discuss any issues raised in class.
- We will provide anonymous section of the discussion board, so that you can feel free to make helpful comments on the course. If there is anything that we can do to make it easier for your to learn, please let us know. Please show courtesy to others and do NOT use the discussion board to make negative comments about your fellow students or staff. Be constructive.

Week	Week Begins	
1	22 Feb	
2	1 March	
3	8 March	Spreadsheet Task
4	15 March	
5	22 March	
6	29 March	
Break		
7	19 April	
8	26 April	Class Test
9	3 May	
10	10 May	
11	17 May	
12	24 May	
13	31 May	

RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

Assessment tasks will include

	Length	Due Date	Weight
Spreadsheet Task		Week 4	2.5%%
Tutorial Presentation	3 minutes	Various	2.5%
Class Test	1.5 hours	Week 8	20%
Essay	1500 words	Week 10	15%
Final Exam	3 hours	Exam period	60%
		Total	100%

Essays and research tasks should be submitted electronically. We will give you instructions on how to do this.

Further details of the assessment tasks will be posted on the Blackboard later in the term. We will post an announcement on the Blackboard to notify you of this. **YOU SHOULD CHECK THE BLACKBOARD FOR ANNOUNCEMENTS AT LEAST ONCE A WEEK.**

Note that you should always acknowledge the source of any work you submit. Rules about academic referencing will be placed on the Blackboard. Please read these before you submit any work.

Extensions will be granted when you can provide evidence of illness or unavoidable disruption to your studies. If you think you deserve an extension, you should send an email to our Teaching Assistant (Minh Phan) via Private Mail explaining the circumstances and requesting an extension.

Late submissions will be accepted up to one week late, but with a penalty of 10% of the marks for the assignment, for each day late (or part thereof). Late submissions will not be accepted after the solutions are posted on the website!

Model solutions to class tests and modelling-type exercises (where appropriate) will be placed on Blackboard within one week after the due date.

Examination

A 3 hour final examination for this unit will be held during the University Examination Period. The date of the exam will be shown on the Exam Timetable which is posted on the University website later in the term.

You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in Draft form approximately eight weeks before the commencement of the examinations and in Final form approximately four weeks before the commencement of the examinations.

<http://www.timetables.mq.edu.au/exam>

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. Information about unavoidable disruption and the special consideration process is available at

<http://www.reg.mq.edu.au/Forms/APSCon.pdf>

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period. (Individual Faculties may wish to signal when the Faculties' Supplementary Exams are normally scheduled.)

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, that is the final day of the official examination period.

PLAGIARISM

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the *Handbook of Undergraduate Studies* or on the web at: <http://www.student.mq.edu.au/plagiarism/>

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

STUDENT SUPPORT SERVICES

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at <http://www.student.mq.edu.au>.

Discussion Area

We will encourage you to participate in class discussions. This might include answering questions raised by the lecturer in class; asking questions about anything you don't understand; or attempting to answer questions raised by other students.

Topics & Threads

The discussion area is divided into topics. When you view the contents of a topic, you will initially see a list of the "threads" in that topic. Clicking on the small plus sign within a square will expand the listing to display all the messages in a thread. Alternatively, the "unthreaded" link will display all messages chronologically, rather than sorted by thread.

If you are posting a reply to someone else's message, view their message and press the "reply" button. Then the software will correctly attach your reply to the same thread as the original message. This makes it easier for others to follow the thread of the argument. Hence the name "thread".

Ensure you comply with the "Information Technology Security Policy and Rules" and the "Information Technology Usage Rules" accessible from the Technical Information link on the home page. Breaches of these rules DO result in disciplinary action.

The rules indicate that offensive language is unacceptable. Please be aware that the students in this unit come from a diverse range of cultural backgrounds and that words that you regard as mild expletives may be highly offensive to others.

Etiquette

Mobile phones and other non-silent devices should be turned off during classes. Offenders may be awarded unpleasant demerits, such as cleaning used overhead projector slides.

In some cultures it is common for students to give gifts to their teachers at the end of semester. The teaching staff understand that being a full-time university student usually involves financial hardship so we are definitely not expecting gifts. Our best reward is to see our students doing well.