

ACST151

INTRODUCTION TO ACTUARIAL STUDIES

Semester 1, 2007

LEARNING GUIDE (2007)

ACST151 Teaching Team

Team Member	Team Role	Room	Email	Consultation Hour
Prof Piet De Jong	Coordinator & Lecturer	E4A 611	pdejong@efs.mq.edu.au	Thursdays, 2-3pm
Prof John Pollard	Lecturer			
Brian Chu	Tutor	E4A 609		
Luke Liu	Tutor	E4A 622D		
Hemang Mehta	Tutor			
Luke Liu	Unit Administrator	E4A 622D		

ACST151 Learning Objectives

The overall aim of ACST151 is to introduce you to typical actuarial tasks in several of the areas in which actuaries commonly work (general insurance, life insurance, investments, superannuation). Specific learning objectives are for you to:

- understand why your actuarial education will include some economics, some accounting, some business finance, some computing and some statistics, as well as the core actuarial subjects;
- encounter some of the fundamental tools used by actuaries (such as the life table, the chain ladder method, investment models);
- understand some basic concepts of actuarial work (like expected present values, cash flow projections, equations of value, etc);
- understand why actuaries develop and use mathematical models of real-world processes;
- read and summarise an article from an actuarial journal, magazine or conference.

Lecture classes

You will have two lecture classes (one 2-hour & one 1-hour) each week:

Lectures	Day	Time	Location
	Tuesday	11am - 1pm	C5C T1 (?)
	Wednesday	12-1 pm	C5C T1 (?)

Any alterations to the lecture times or locations will be advised in classes and on the ACST151 WebCT site.

Tutorial classes

There are six tutorial groups. Each group meets once a week, on Friday, for a 1-hour tutorial class. You must be registered for one of these tutorial groups:

Day	Time	Location	Tutor
Friday	9-10 am	W5C 303	Brian Chu
		W5A103	Luke Liu
	10-11 am	W5C 303	Brian Chu
		W5A 103	Hemang Mehta
	12-1 pm	W6B 315	Hemang Mehta
		C5A 313	Luke Liu

Your tutorial class is an important part of your weekly learning cycle, and is also a good opportunity to get to know some of your fellow students. Your tutor’s role is basically to help you learn. A few short years ago your tutor was in the same situation as you – a new actuarial student – so he knows what it’s like!

Each week’s tutorial questions can be found on the ACST151 WebCT site (please make sure you have attempted all questions before come to the tutorial) and the solutions will be available at the end of the corresponding week.

Textbook

The textbook for ACST151 is:

- Pollard, J H (2004), *Introduction to Risk and Insurance*, Perdisco, Sydney

For a price of \$79.95 (including GST) you will receive a printed copy of the textbook, plus an internet based electronic workbook. The workbook complements the textbook by giving you access to sample spreadsheets that illustrate the actuarial techniques covered, as well as weekly practice problems to help you learn those techniques, and the eight assignments that form part of your assessment for ACST151. The workbook is internet based, so you can use it any time of day, any day of the week, from anywhere in the world where you can get internet access.

See the separate document (also available on the ACST151 WebCT site) for how to get your copy of the textbook and electronic workbook.

ACST151 WebCT Site

You can access the WebCT site by going to this web page, clicking on “Login”, then entering your Macquarie University username and password (MQID):

<http://online.mq.edu.au>

EFS Resource & Information Centre (ERIC)

The EFS Resource & Information Centre (ERIC) is in Room 106, Building E4B. ERIC is a drop-in information centre specifically for students who are studying EFS subjects. For more information, including opening hours, visit the ERIC web page at:

<http://www.efs.mq.edu.au/services/eric.htm>

Assessment components in ACST151

How will your learning in ACST151 be assessed (graded)? On the basis of the following assessment tasks:

Assessment task	Weighting	
	Each	Total
Eight (8) e-workbook assignments	1.25%	10%
Two (2) In-Class Tests	10%	20%
Final Examination		70%

You need to achieve at least a pass both in your final exam and overall to pass this subject. Further details of each assessment component are given below.

In-Class Tests

There will be two In-Class Tests, held during Wednesday lecture classes, as follows:

Test	Topics included	Date	Time
Test 1	To be advised	Wednesday, 21 March	12 noon
Test 2	To be advised	Wednesday, 16 May	12 noon

Normal examination rules apply to the conduct of In-Class Tests. These rules are set out under the heading “Student conduct in examinations” on page 24 of the 2007 Macquarie University Undergraduate Handbook, available at (make sure you read and note these rules prior to the first In-Class Test):

<http://handbook.mq.edu.au/PDFs/2007/ug-general-student-info.pdf>

Please note that the In-Class Test dates and times may be subject to change, and that any alterations will be advised in classes and on the ACST151 WebCT site.

Your graded In-Class Tests will be returned to you at your tutorial class. Your In-Class Tests will count towards your final grade (each Test is weighted 10%).

Final exam

The final exam will be a 3-hour written paper with ten minutes reading time. The final exam will count 70% towards your final grade for ACST151. It will be held on a date to be advised during the Macquarie University Mid-Year Examination Period (13 to 30 June, 2007).

Help with using & making spreadsheets

Many of the actuarial techniques you will learn in ACST151 will be illustrated by spreadsheet models. You will also be asked to develop or use several spreadsheet models. If you feel that your spreadsheet skills need to be improved, you may find the Excel tutorials (which are free to use) at this web site helpful:

<http://www.fgcu.edu/support/office2000/excel/index.html>

Electronic workbook (e-workbook)

In ACST151 this semester you will use an internet based e-workbook, published by Perdisco (an electronic publishing company). The e-workbook has been designed to support your learning by helping you to apply and understand the new concepts you will encounter in ACST151. The e-workbook includes practice questions (giving you practice at applying what you learn in ACST151 to solving financial problems), as well as eight assignments. You will be able to access the workbook from the computing labs on campus, from the library, from home, from work, from internet cafes – in short, from anywhere you can get access to the internet. The workbook is available 24 hours a day, 7 days a week.

You need to buy the Workbook (for \$79.95 including GST) from its publisher Perdisco. See the attached handout about the ACST151 electronic workbook, which tells you how to purchase your copy.

For most major topics in ACST151, you will find a set of practice problems in the workbook. These problems will help you to understand the subject better by giving you practice at applying the basic ideas in solving a range of problems. The workbook will not only give you feedback on whether or not your answers are correct, it will provide you with **complete solutions** to all problems.

The practice questions will not count towards your assessment in this unit. They are there to help you learn and to give you feedback, not to be used in assessing your learning. The eight assignments you will do with the aid of the e-workbook will count (10% in total) towards your final grade in ACST151.

Grading your learning in ACST151

Macquarie University uses the grades HD (High Distinction), D (Distinction), CR (Credit), P (Pass), PC (Pass Conceded) and F (Fail) for grading the learning of students in units of study. In ACST151, your grade will be determined by how well you show you understand the basic principles and concepts covered. P represents the lowest (basic) level of understanding, CR a higher level than P, D a higher level than CR, and HD the highest level. This table is a guide to the meaning of each grade in the context of ACST151:

Grade	Level of understanding represented by that grade
HD	<ul style="list-style-type: none"> • Able to apply basic principles to solve unfamiliar, non-standard problems • Able to explain solutions & interpret results in clear, simple, non-technical language
D	<ul style="list-style-type: none"> • Able to apply basic principles to solve problems which differ significantly from the familiar • Able to explain solutions & interpret results clearly and concisely
CR	<ul style="list-style-type: none"> • Able to apply basic principles to solve problems which differ slightly from the familiar • Able to explain rationale for calculations & interpret results in those cases
P	<ul style="list-style-type: none"> • Able to perform basic numeric procedures on standard problems in familiar scenarios • Able to explain rationale for calculations & interpret results for standard problems
PC	<ul style="list-style-type: none"> • Marginally satisfactory achievement of P level understanding • Able to perform basic numeric procedures, but not able to explain them clearly
F	<ul style="list-style-type: none"> • No evidence of achieving P level understanding

Special Consideration

If the quality of your learning and work in this subject is adversely affected by illness, accident or some other form of unavoidable disruption, you should familiarise yourself with the special consideration provisions on page 98 of Macquarie University's Bachelor Degree Rules 7 & 9 in the 2007 Handbook of Undergraduate Studies. **All requests for special consideration should be made in writing, on the standard form, and submitted to the Student Enquiry Service on level 1 of the Lincoln Building.**

You must complete a Professional Authority Form to accompany any application for special consideration based on medical grounds. The special consideration application and professional authority forms are available from the Student Enquiry Service, or from this web site (click on *Academic Forms*):

www.reg.mq.edu.au/academic-index.htm

Calculators

You will need to use a calculator at the In-Class Tests and the Final Exam. Your calculator must be portable, silent and battery operated. In any question requiring calculations you will have to give a clear indication of the working involved in arriving at your answer.

ACST 151 Timetable (2007)

Week No	Week Beginning	Topics	Lecturer	Textbook Chapter	In-Class Tests
1	26 Feb	• Gambling risk and ruin	JP	1	
2	5 March	• Gambling risk and ruin	JP	1	
3	12 March	• Risk transfer by insurance	JP	2	
4	19 March	• More varied risks	JP	3	Test 1
5	26 March	• Insurance profit	JP	4	
6	2 April	• The uncertainty of life	JP	5	
	9 April	NO CLASSES			
	16 April	NO CLASSES			
7	23 April	• Long term life insurance	JP	6	
8	30 May	• Long term life insurance	JP	6	
9	7 May	• Varying investment returns	JP	7	
10	14 May	• Financial projections & spreadsheets	PdJ	8	Test 2
11	21 May	• Financing retirement incomes	PdJ	8	
12	28 May	• Financing retirement incomes	PdJ	9	
13	4 June	• Actuarial control cycle	PdJ		

Note :

- (1) There **will be** tutorial classes during Week 1 (on Friday, 2 March).
- (2) There **will not be** tutorial classes during Week 6 (on Friday, 6 April).
- (3) Topics covered may not coincide exactly with the semester weeks as shown above.
- (4) Changes to the timetable may occur. Any alterations will be advised in classes and on the ACST151 WebCT site.