

MACQUARIE
UNIVERSITY



FACULTY OF
BUSINESS AND ECONOMICS

ACST357 / 862
General Insurance Pricing and
Reserving

Semester 2, 2011

*Department of Applied Finance and Actuarial
Studies*

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

Year and Semester:	Semester 2, 2011
Unit convenor:	Associate Professor David Pitt
Prerequisites (for ACST357):	STAT271 (P) and ACST356 (P)
Prerequisites (for ACST862):	STAT810 (P)
Credit points (for ACST357):	3
Credit points (for ACST862):	4

Students should note that in 2011 both ACST357 and ACST862 contain material on No Claim Discount Systems that was covered in ACST356 and ACST861 in 2006-2010.

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

ABOUT THIS UNIT

This unit examines the use of statistical models in the insurance context. The material covered in the unit is in six parts. The first part, Section 1, is an introduction to the statistical software R. We will also make some use of R in later parts of the unit. The second part, Section 2, covers no claim discount systems where premium rating is based on the recent claims experience of the insured. The third part, Section 3, covers maximum likelihood estimation with emphasis on algorithms for finding maximum likelihood estimates when closed form solutions are either not available or not easily obtained. The fourth part, Sections 4 and 5, covers generalised linear models (GLMs). GLMs are commonly used in pricing and reserving in general insurance and also have applications in life insurance. The fifth part, Sections 6 to 9 inclusive covers time series analysis. We will study univariate time series in some depth and we will also cover the basics of multivariate time series analysis. Time series analysis is useful in many areas of actuarial practice including investments and general insurance. The sixth and final part of the unit covers the calculation of outstanding claims provisions in general insurance. We will cover deterministic methods and also some stochastic approaches that apply earlier material from the GLM part of the unit.

This unit relies heavily on your statistics studies (STAT 271 or STAT 810) and you should ensure that you revise this work if necessary. In particular, you should be familiar with:

- the theory of statistical distributions, including the meaning of a random variable, discrete and continuous random variables, density functions and cumulative density functions;
- basic results relating to expectation, variance and covariance;
- theory of estimation including the method of moments and maximum likelihood estimation;
- the use of Normal Distribution and Chi-Squared distribution tables; and
- basic results from the theory of the linear regression model.

TEACHING STAFF

A/Prof David Pitt is the unit convenor and will present all the lectures in the unit.

Celeste Chai is the teaching administrator for this unit. Administrative questions that are not covered in this unit outline should be directed to her via the private Mail facility of the website. If the questions are of interest to everyone, the question and the reply will be posted to the website, so you should specifically request if you want your message to remain private.

Questions about unit content should be sent to the Discussion Board of the website or raised during tutorials or lectures.

If you need to contact lecturing staff, including to arrange for an in-person meeting, please do so via the private Mail facility of the website.

CONSULTATION TIMES

Weeks 1 to 13	David Pitt	Mon 2-5	E4A609
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You are encouraged to seek help at a time that is convenient to you from a staff member teaching on this unit during their regular consultation hours. In special circumstances, an appointment may be made outside regular consultation hours. Staff will not conduct any consultations by email. You may, however, phone staff during their consultation hours.

Students experiencing significant difficulties with any topic in the unit are encouraged to seek assistance immediately.

CLASSES

The timetable for classes can be found on the University web site at www.timetables.mq.edu.au.

Lectures are held Thursday 11 – 1 in E7BT2 and Friday 1 – 2 in C5CT1. The unit material is covered in the three hours of lectures each week.

Tutorials are held for ACST357 students Friday 3-4 (two groups) and Friday 4-5 and for ACST862 students Friday 2-3, commencing in Week 2. **You must attend the tutorial class in which you are enrolled.** Note that the tutorial in week n will work through questions relating to the material taught in lectures during week $n - 1$ for $n = 2, 3, \dots, 13$. The tutorial is an opportunity for you to attempt the section exercises given at the end of each section of work, and to discuss problems with the tutor.

CLASS ETIQUETTE

Mobile phones should be switched off during all lectures and tutorials. If there is a reason for you to keep your phone on you should request to be allowed to do so before the start of the class. Lectures commence at 5 minutes past the hour and you are expected to be punctual. You are expected to not talk during classes so as not to disrupt your fellow students (and the lecturer) except of course when working on a lecture exercise in groups.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

Required texts

Lecture Handouts (i.e. notes with gaps) are available for downloading from the ACST357 / 862 teaching website. It is recommended that you print the relevant section of the Lecture Handout in advance of the relevant lecture, and bring it to classes to complete.

Complete Notes including solutions to Lecture Exercises and solutions to Section Exercises will be available for downloading from the ACST357 / 862 teaching website on Friday at 5pm in the week that the Section tutorial is completed. This schedule is fixed and will not be varied for individual students unless the formal grounds for Special Consideration or Equity Support are met.

If you decide to purchase the optional text (the ActEd CT6 notes), it is recommended that you read the relevant sections in advance of the lecture. During the lecture you can then work through the Lecture Handout, which will cover similar ground but expressed in a different way.

Optional ActEd material

The ActEd CT6 are not set as required or recommended reading for this unit, since the unit notes are comprehensive and detailed. If you decide to purchase the ActEd CT6 notes, please make your order on the ASSOC webpage www.mqassoc.org by going to the "Order ActEd Notes" tab on the left. Those who want to view a copy of the ActEd CT6 notes during the semester should contact the teaching assistant using private Mail on the ACST357 / 862 website. Arrangements will be made for you to view them in the Department of Applied Finance and Actuarial Studies. The notes are not available in the library. This reference copy of the notes cannot under any circumstances be photocopied.

Other useful references

- Hossack, I.B., Pollard J.H, and Zehnwirth, B. (1999). *Introductory statistics with applications in general insurance, second edition*. Cambridge University Press: Cambridge.
- De Jong, P. and Heller, G.Z., (2008). *Generalized linear models for Insurance Data*. Cambridge University Press: Cambridge.
- Casualty Actuarial Society. (2001). *Foundations of Casualty Actuarial Science, 4th edition*. Casualty Actuarial Society.

These texts are available in the library, with a single copy of each also available in the Reserve section of the library.

TECHNOLOGY USED AND REQUIRED

- MS Excel and MS Word will be used throughout the unit.
- The R statistical software package will be used throughout the unit.
- Students will be required to use a non-programmable calculator in the final examination and during the in-class test.

UNIT WEB PAGE

To access the website, go to <http://learn.mq.edu.au> and login using your usual login and password. You will then have access to the websites for all the units in which you are

enrolled. If you have any trouble logging in (e.g. you have forgotten your password), please contact the Student IT Helpdesk.

Before logging in, you should follow the link labelled "Technical Information" and read all the information there, including the Information Technology Security Policy and Rules and the Information Technology Usage Rules. This technical information also mentions a number of "plugins" that may be required. Of those listed, in this unit you will only need Acrobat Reader. Remember to close your browser when you have finished using the site. If you don't, another person can use the still running browser to access the website with your account.

The web site will be used as an integral part of this unit. The main components of the website (listed on the left hand side toolbar) are:

Course Content

- Unit Outline 2011: You can download this unit outline from here.
- Unit Notes: A set of Lecture Handouts, and Complete Notes for each Section, including solutions to Lecture Exercises, and solutions to Section Exercises (posted Friday 5pm according to the schedule given previously) will be posted here for downloading.
- Assignment: Any data or information that you need to complete the assignment will be made available here.
- Revision exercises: Additional revision exercises will be made available here.
- Non-assessable class tests and Mock Test: As additional feedback this semester I will provide three tests that can be completed under test conditions, invigilated by me during the semester. I will mark and provide comments and feedback on the tests of all students completed during the advertised time. Solutions will also be available after the test. Copies of these tests with solutions will also be made available online. There will also be a mock test prior to the mid-semester test.
- Tests and exams: Information on relevant questions from past CT6 examinations of the UK Institute and Faculty of Actuaries will be made available here.
- Links: Any web links you need to use will be made available here.

Announcements. Ensure that you keep up to date with announcements posted here.

Calendar. The calendar will list the dates that some items of assessment become available; however it is your responsibility to familiarise yourself with all assessment requirements including those not listed on the calendar.

Discussions. You should use the Discussion facility, along with the tutorial time, as your resource for asking questions about the content of the unit. Please address your questions to your fellow students – if there is no response or an incorrect response from the class the teaching staff will post a response. You are encouraged to post answers to other students' questions – this is one of the most effective ways to clarify your own understanding of the material. You should consult the Discussions frequently, to contribute to questions and see answers to queries.

Mail. You should use private Mail to send administrative queries to the unit convenor or teaching administrator. Staff will also use Private Mail to contact you individually, if necessary. You may also use this facility to contact your fellow students. It is your responsibility to check the website regularly to make sure that you are up-to-date with messages sent to your Private Mail address.

Search. Use this tool to search the website.

Video iLecture. In 2011, video iLecture will be available for ACST 357 / 862. The recording captures video output from the lecturer's PC and visualiser, and combines and synchronises the video with audio of the lecture. Other forms of presentation such as whiteboard usage or overhead projector usage are not captured by iLecture. You are encouraged to attend all lectures and to use the iLecture as a resource to listen again to a particular explanation or part of the lecture as necessary.

LEARNING OUTCOMES

The broad learning outcomes of this unit are given below. The learning outcomes as well as the specific learning objectives are given in the lecture notes at the start of each section of work. You should review these in advance of each lecture and after completing each section of work.

On completion of this unit you should be able to do the following.

1. Use the R statistical software package to conduct statistical analyses of the types covered in this unit. Understand and apply basic programming techniques using R.
2. Understand and perform calculations using simple no claim discount systems.
3. Understand and apply the method of maximum likelihood estimation. Apply the methods of Newton-Raphson and Fisher-Scoring to simple univariate and multivariate maximum likelihood estimation problems.
4. Understand and apply generalised linear models.
5. Understand simple stationary univariate time series models for description and forecasting. Define the basic multivariate time series models.
6. Understand and apply deterministic and basic stochastic methods for the calculation of outstanding claims provisions in general insurance.

GRADUATE CAPABILITIES

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop the capabilities the University's graduates will need to develop to address the challenges, and to be effective, engaged participants in their world. This unit contributes to this by developing the following graduate capabilities:

1. Discipline Specific Knowledge and Skills:
 - (a) Have a deep intuitive understanding of the meaning of probability and the methods of manipulating probabilities.
 - (b) Have skills in fitting and assessing the reliability of statistical models, particularly in the context of financial applications.
2. Critical, Analytical and Integrative Thinking
3. Problem Solving and Research Capability

TEACHING AND LEARNING STRATEGY

- The unit is taught using three hours of lectures and a weekly tutorial.
- You are expected to read lecture materials in advance of the lectures and to participate actively in the tutorial classes.

RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

This unit is assessed using one mid-semester class test, one major assignment and a final examination. The assessment structure is suitable given the problem-solving and technical nature of the unit. In addition, to provide helpful feedback, there will be three additional optional non-assessed class tests. An assessment schedule is given below and any changes to the assessment or assessment due dates will be advised in classes.

In addition to tasks that count for assessment, you will be provided with Lecture Exercises, Section Exercises to attempt during the tutorials and / or in your own time, and two Mock Tests for which solutions will be discussed in the tutorial class prior to each class test.

	Assessment Task 1	Assessment Task 2	Assessment Task 3
Title/Name	Class Test	Assignment	Final Exam
Description	In class test covering Sections 1 to 5.	Major assignment covering most of the material taught in the unit. To be completed over the entire semester.	Three hour written exam.
Due date	Held on Thursday 6 October at 11am.	Friday 4 November at 4pm.	During the university exam period.
% Weighting	10%	20%	70%
Grading method	Test will be marked against a marking template.	Assignment will be marked against a marking template.	Exam will be marked against a marking template.
Submission method	At conclusion of test.	Assignment submission box at BESS.	Exam period
Feedback	Marked papers and feedback within 12 working days of the class test date.	Marked papers and feedback within 12 working days of the assignment due date.	Final result communicated to students for entire assessment.
Estimated student workload (hours)	15 hours	20 hours	40 hours
Learning outcomes assessed	Outcomes 1,2,3 and 4.	Outcomes 1,2,3,4,5 and 6.	Outcomes 1, 2, 3, 4, 5 and 6
Graduate capabilities assessed	Outcomes 1, 2 and 3	Outcomes 1, 2 and 3	Outcomes 1, 2 and 3
			During the university exam period.

Week	Week Beginning	Test or Asgt	Lecturer	Thursday 11-1 class	Friday 1-2 class	Tutorial
1	1 Aug	-	DP	Lecture: Section 1 <i>Intro to R</i>	Lecture: Section 1 (cont)	-
2	8 Aug	-	DP	Lecture: Section 2 <i>NCD Systems</i>	Lecture: Section 3 MLE	Section 1 Exercises
3	15 Aug	-	DP	Lecture: Section 3 (cont)	Lecture: Section 3 (cont)	Section 2 Exercises
4	22 Aug	-	DP	Lecture: Section 4 <i>GLM I</i>	Lecture: Section 4 (cont)	Section 3 Exercises
5	29 Aug	Non-assessable Test 1 (S1,2,3)	DP	Lecture: Section 5 GLM II	Lecture: Section 5 (cont)	Section 4 Exercises
6	5 Sep	-	DP	Lecture: Section 6 Time Series I	Lecture: Section 6 (cont)	Section 5 Exercises
7	12 Sep	-	DP	Lecture: Section 7 Time Series II	Mock Test	Mock Test Solutions
STUDY BREAK	19 Sep 26 Sep	- Non-assessable Test 2 (S4, 5)				
8	3 Oct	-	DP	Mid-semester test	Lecture: Section 7 (cont)	Section 6 Exercises
9	10 Oct	-	DP	Lecture: Section 8 Time Series III	Lecture: Section 8 (cont)	Section 7 Exercises
10	17 Oct	-	DP	Lecture: Section 9 <i>Time Series IV</i>	Lecture: Section 10 <i>Outstanding claims provisions: deterministic</i>	Section 8 Exercises
11	24 Oct	-	DP	Lecture: Section 10 (cont)	Lecture: Section 10 (cont)	Section 9 Exercises
12	31 Oct	Assignment	DP	Lecture: Section 11 <i>Outstanding claims provisions: stochastic</i>	Lecture: Section 11 (cont)	Section 10 Exercises
13	7 Nov	Non-assessable Test 3 (S6,7,8 and 9)	DP	Lecture: Section 11 (cont) and revision	Unit surveys, Exam information, Revision	Section 11 Exercises

Lecture Exercises and Section Exercises are aimed at helping you to understand the fundamental concepts before moving on to more difficult material. **They are not necessarily indicative of the difficulty of questions you could expect in the mid-semester test and on the final exam** (i.e. they are mostly easier, to assist your initial learning). Practice class tests and UK IoA examinations with full solutions are available from the website, and give you a good source of practice questions that are of examination difficulty.

Non-assessable Tasks: Lecture Exercises, Section Exercises, Mock Test and Non-assessable class tests.

The Lecture Exercises and Section Exercises are aimed at developing your understanding of the unit material so that you are able to successfully complete the assessable tasks.

Any student coming to lectures or tutorials is expected to do so with the intention of actively participating. This includes bringing all necessary materials (Lecture Notes, calculators etc.) and making a sincere and engaged attempt at Lecture and Section Exercises during class time.

The non-assessable tests are to be attempted outside lecture time. A time and location will be advised where these tests can be taken under invigilated examination conditions. The aim of the non-assessable Tests is to give you practice at attempting questions under examination conditions, so that you test your understanding of the content as well as your ability to manage your time and stress. If you attempt these during the advertised time and submit your attempt at that time, I will provide you with prompt feedback on your progress.

Assignment

There is one major assignment in this unit.

- The assignment will be made available early in the semester. It will contain some exam style questions and also some harder problems to encourage you to think carefully about the material in the unit. It should be attempted as you complete the relevant material for each question over the semester.
- Assignments submitted late will not be marked.

Mid-semester Class test

There will be one assessable mid-semester class test worth 10% of the final assessment for the unit.

- The mid-semester test will be held Thursday 6 October at 11am. It will cover Sections 1, 2, 3, 4 and 5.

Marked papers including individual feedback will be returned to BESS. Class feedback and a marking guide will be provided on the website. It is hoped that marked papers and feedback will be returned within 12 working days of the class test date.

Exam

The final examination is worth 70% of the final assessment for the unit. It will be a three-hour written paper with ten minutes reading time held during the University Examination period.

The University Examination period in Second Half Year 2011 is from 14 November to 2 December. 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 from <http://www.timetables.mq.edu.au/exam>.

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.

SPECIAL CONSIDERATION FOR ASSESSMENTS AND EXAMS

If illness or unavoidable disruption affects your ability to submit an assessment task or sit the tests or exam, you should read the information at

http://www.businessandconomics.mq.edu.au/new_and_current_students/undergraduate/how_do_i/special_consideration

immediately. Allowances may be made where a formal application for Special Consideration is approved. For your application to be considered, you must ensure that you meet the requirements specified, including providing a Professional Authority Form for applications based on medical grounds.

The only exception to sitting an examination at the designated time is where an application for Special Consideration due to documented illness or unavoidable disruption is approved. By submitting a request for special consideration you are agreeing to be available to sit a Supplementary Examination if required. If a Supplementary Examination is granted as a result of the Special Consideration process then

- The examination will be scheduled after the conclusion of the official examination period.
- You do not have the right to request an alternative time, unless the scheduled time clashes with another Macquarie University supplementary exam that you are required to attend.
- Your performance in the Supplementary Examination replaces your performance in the original examination (if any). You do NOT have the right to subsequently request that your result be based on the original examination rather than the Supplementary Examination.

RULES REGARDING TESTS AND EXAMINATIONS

Normal examination rules apply to the conduct of the mid-semester test and the final examination. These rules are set out under the heading "Conduct of Examinations" in the Student Information–Assessment section of the current Macquarie University Handbook of Undergraduate Studies. Students are responsible for familiarising themselves with these rules prior to the mid-semester test and final examination.

You should ensure that your handwriting in the class tests and in the final examination is legible. Sections of work that are not legible will not be marked.

Calculators will be allowed in the class tests and the final examination but a clear indication of the steps involved in every calculation must be shown. Any machines that have a text-retrieval capacity, whether or not they have a full alphabet on the keyboard, are not allowed.

Calculators may be checked at the commencement of the class tests and final exam, and the make/model may be recorded.

Dictionaries will not be permitted in the class tests or the final examination.

A Formulae Sheet will be provided in the class tests and final examination. No other reference material is permitted. This Formulae Sheet will be identical to the one provided on the teaching website.

Academic Senate has resolved that mobile phones should not be used in classrooms or be brought into examination rooms. Communication devices, including but not restricted to mobile phones, text message receivers, pagers and wireless-equipped calculators, may not be brought into the class tests or exam. If a student is found to have brought such a device into the examination room, the argument that the device was turned off will NOT be regarded as an acceptable excuse.

ELECTRONIC COMMUNICATION AND YOUR STUDENT FILE

Every business keeps a record of its correspondence with its customers. The University is no exception and it maintains a file for every student. Staff are required to ensure that copies of all correspondence with you are added to your file. Historically, "correspondence" meant letters, but nowadays it also includes electronic communication such as email. Staff have some discretion here and might not file copies of trivial emails, but it is difficult to define precise boundaries here, so it is safer to assume that any email you send to a staff member will be added to your file.

Some people regard email as more ephemeral than a letter and thus tend to take less care with issues such as clarity of expression, grammar and spelling. Before sending an email to a staff member, a good question to ask yourself is: "If a member of staff is reviewing my student file prior to writing a reference for me, and they see a copy of this email, would that staff member gain a favourable impression of my level of communication skills?"

In this context, email includes communications you send to staff with the mail tool in the unit's web site. It does not normally include postings you make to the discussion area. However, in those very rare cases where a student makes an inappropriate posting to the discussion area, a copy of the posting would be added to that student's file.

ACADEMIC HONESTY

The nature of scholarly endeavour, dependent as it is on the work of others, binds all members of the University community to abide by the principles of academic honesty. Its fundamental principle is that all staff and students act with integrity in the creation, development, application and use of ideas and information. This means that:

- all academic work claimed as original is the work of the author making the claim
- all academic collaborations are acknowledged
- academic work is not falsified in any way
- when the ideas of others are used, these ideas are acknowledged appropriately.

Further information on the academic honesty can be found in the Macquarie University Academic Honesty Policy at http://www.mq.edu.au/policy/docs/academic_honesty/policy.html

GRADES

Macquarie University uses the following grades in coursework units of study:

HD - High Distinction
D - Distinction
CR - Credit
P - Pass
F - Fail

Grade descriptors and other information concerning grading are contained in the Macquarie University Grading Policy which is available at:

<http://www.mq.edu.au/policy/docs/grading/policy.html>

Your final result will include one of these grades plus a standardised numerical grade (SNG). The numerical marks resulting from assessment of your work in this unit will be used as an initial indicator of the quality of your learning and understanding. The use of these numerical marks is, however, only a starting point in determining the appropriate grade. **In particular, note that the SNG ranges mentioned in the University Grading Policy are not the raw marks. To obtain a grade you must satisfy the qualitative definition of that grade. Once your grade has been determined, you are allocated an SNG indicating your approximate position amongst students assigned that grade.**

EXEMPTIONS

The units ACST356 / 861 and ACST357 / 862 together correspond to the professional subject CT6. The exemption will be recommended if and only if a SNG of at least 60 is achieved in both units and the average SNG is at least 65.

GRADING APPEALS AND FINAL EXAMINATION SCRIPT VIEWING

If, at the conclusion of the unit, you have performed below expectations, and are considering lodging an appeal of grade and/or viewing your final exam script please refer to the following website which provides information about these processes and the cut off dates in the first instance. Please read the instructions provided concerning what constitutes a valid grounds for appeal before appealing your grade.

http://www.businessandeconomics.mq.edu.au/new_and_current_students/undergraduate/how_do_i/grade_appeals.

SPECIAL CONSIDERATION

The University is committed to equity and fairness in all aspects of its learning and teaching. In stating this commitment, the University recognises that there may be circumstances where a student is prevented by unavoidable disruption from performing in accordance with their ability. A special consideration policy exists to support students who experience serious and unavoidable disruption such that they do not reach their usual demonstrated performance level. The policy is available at:

http://www.mq.edu.au/policy/docs/special_consideration/procedure.html

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>.

BESS. Business and Economics Student Services (BESS) is located in room E4B106. Information about facilities and services is at:

http://businessandconomics.mq.edu.au/for/new_and_current_students/undergraduate/bess

In this unit, class tests / assignments / etc. will be returned via BESS.

ACSTINFO. This ACSTINFO site is used to distribute information to all students majoring in actuarial studies. The information supplied may include administrative information and job advertisements. You will retain access to this site during the vacation following the end of this semester. It is to your advantage to ensure you read information on this web site regularly. You should not assume that information posted there will also be repeated in lectures. To access the site, login at: <http://learn.mq.edu.au/> and the site should appear among your list of units. When you first login, please read the section labelled "How to use this site." This contains useful information which will help you determine when there is new information on the site which you should read.

IT CONDITIONS OF USE

Access to all student computing facilities within the Faculty of Business and Economics is restricted to authorised coursework for approved units. Student ID cards must be displayed in the locations provided at all times.

Students are expected to act responsibly when utilising University IT facilities. The following regulations apply to the use of computing facilities and online services:

- Accessing inappropriate web sites or downloading inappropriate material is not permitted. Material that is not related to coursework for an approved unit is deemed inappropriate.
- Downloading copyright material without permission from the copyright owner is illegal, and strictly prohibited. Students detected undertaking such activities will face disciplinary action, which may result in criminal proceedings.

Non-compliance with these conditions may result in disciplinary action without further notice.

Students must use their Macquarie University email addresses to communicate with staff as it is University policy that the University issued email account is used for official University communication.

INSTITUTE OF ACTUARIES OF AUSTRALIA

The Institute of Actuaries of Australia (IAAust) allows students to become IAAust University Subscribers free of charge. Full time undergraduates studying at an Institute accredited university who are members of a university student actuarial society are eligible. To sign up, go to

<http://www.actuaries.asn.au/Membership/MembershipoftheInstitute/Subscriber.aspx>

The University Subscriber offer is not a membership of the IAAust but a subscription to receive information on career opportunities, invitations to selected IAAust events and online publications. You might also consider joining the IAAust – there are advantages in doing so while a full-time student. For membership information, go to

<http://www.actuaries.asn.au/Membership/MembershipoftheInstitute.aspx>

FEEDBACK

I would welcome your feedback on any aspect of the unit. If you see that something could be improved, don't sit back and complain to your friends! Come and see me and let me know your ideas and if I agree that your ideas are good I will make changes. You can give me feedback in lectures or by contacting me via Mail on the website.

Significant changes have been made to the unit this year in response to feedback, including use of the R software, development of detailed lecture notes and a much more detailed tutorial program, introduction of optional class tests, continuing with iLecture and introducing a major assignment. These changes will be discussed in more detail in classes.

I hope not to see any feedback in the end-of-semester unit evaluations that I haven't heard about already and therefore had the opportunity to incorporate to improve the unit. Please get involved in making this unit as useful and rewarding as possible.

David Pitt
25 July 2011