



MACQUARIE UNIVERSITY
DIVISION OF ECONOMIC AND FINANCIAL STUDIES
UNIT OUTLINE

ACST345 Contingent Payments

SECOND SEMESTER 2005

Unit convenor: Leonie Tickle
Prerequisites: ACST344 (P); ACST200 (P)

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 the unit convenor.

ABOUT THIS UNIT

This unit brings together mathematics of finance from ACST200, probability from ACST211, rates of survivorship and death from ACST344 and material from various statistics courses. This results in techniques that may be used to price contracts that provide for the payment of specified benefits contingent on the happening of specified events. Examples studied include life insurance contracts, where benefits may depend on the survival or death of a particular person, general insurance contracts, where payment of benefits may relate to the theft of a car or fire damage to a house, and superannuation fund benefits.

A very good knowledge of the material covered in ACST344, along with completed tables from the Tables tasks in this unit, is required.

TEACHING STAFF

- Leonie Tickle (room C5C 488, phone 9850 8567)
- Sue Clarke

Questions relating to the administration of the unit should be directed to Leonie Tickle as the unit convenor. Questions relating to the unit content should be directed to your lecturer **for that section of work** (during the tutorial or via the ACST345 website).

CLASSES

Tuesday and Thursday classes

Lectures are held Tuesday 11 – 1 in W5AT1 in weeks 1 – 12
 Thursday 11 – 1 in room E7BT2 in weeks 1 – 10
 Thursday 11 – 1 in the computer lab C5C 213 in weeks 11 and 12

There will be no classes in week 13.

The Pres – Intro session will be held during the lecture times in week 2. This will be an introduction to presentation and research skills and will include important information about the group research presentations assessment task. All students are expected to attend this session.

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Friday classes

Friday classes may be a tutorial, presentation or consultation session. In the Unit Timetable below:

Tutorial = Tutorial class

Tutorial classes will be conducted by the lecturer for the corresponding week of work. These will be held in C5A226 on Friday of weeks 1 – 8. Although the class is scheduled for two hours the second hour will be cancelled if there is no demand, in which case the class will run from 11 pm to 12 noon. Therefore, please do not arrive for the tutorials in the second hour.

Pres = Group research presentations sessions

Pres – 1, 2 and 3 are sessions in weeks 9 – 11 (14, 21 and 28 October) at which students will give their presentations. There will be three concurrent presentation streams for these sessions – you will be allocated to a stream by the unit convenor during the semester. Presentation stream 1 classes are to be held in C5A226, stream 2 classes in E7B263 and stream 3 classes in E5A118. You are required to attend all the presentation sessions for your stream.

Consultation = Consultation

There will be a tutor available in room C5C485 to answer questions on Friday 4 November, 11 am – 1pm. The tutor will answer questions on all topics except profit testing (questions on profit testing should be directed to Sue Clarke via the website) in preparation for the exam.

There is no Friday class in week 13.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

A set of unit notes, including lecture handouts (ie. notes with gaps) and exercises for the first six sections, will be available from the Macquarie University Co-op Bookshop at the start of the semester. Material for remaining topics will be made available later in the semester. Complete notes will be made available for downloading from the ACST345 website.

Reference text

Reference will be made to *Formulae and Tables for Actuarial Examinations* published by the Institute of Actuaries and Faculty of Actuaries. This is an old edition, with a blue cover, and differs from the one currently on sale from the Institute and Faculty via ActEd. If you do not have this book, then you must have printouts of your own tables, which you were required to generate in ACST344.

You will be provided with this book or a photocopy of relevant sections of it in the class test, if required, and in the final examination. **You are required to be familiar with the contents and layout of these tables before using them under test or examination conditions.** You should look at the copies that are available in ERIC and the library, where there are copies in Reserve, 3-day loan and unrestricted (HG8067.F67). Note also that the green copies (in the library) have more formulae in the front section than the blue copies (in ERIC). The books supplied for the class test and examination will be the blue version. The layout of the tables is the same in both versions.

UNIT WEB PAGE

To access the website, go to <http://online.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 Library Information Customer Service Desk.

Before logging in to the ACST345 site, you should follow the link labelled "Using WebCT" 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 are:

Unit Announcements

Important announcements made in class will be posted here.

Unit Outline

You can download this unit outline from here.

Unit Notes

Complete notes, solutions to lecture exercises and solutions to weekly exercises will be posted here for downloading. For the first six sections, the notes will be posted at the end of each section of work (usually Thursday 1 pm) – the arrangements for later sections will be advised in class. It is important to attempt the exercises yourself before referring to the solutions.

Exams and Tests

Previous examinations and tests for ACST345 are available here.

Class Discussion

You should use the Discussions facility, along with the tutorial time, as your resource for asking questions about the content of the unit. You are also encouraged to post answers to other students' questions – this can be a very useful learning experience. You are able to post messages anonymously if you wish, although I would prefer that you reveal your identity. You should consult the Discussions frequently, to contribute to questions and see answers to queries.

Private Mail

You should use the Mail facility to contact the unit convenor about private administrative matters. It will also be used to contact you individually, if necessary. You may also use this facility to contact your fellow students. Check your mailbox regularly for messages.

Group Research Presentations

Information about the group research and presentation assessment task will be available here.

Mortality Tables

Mortality rates used to construct tables used in this unit will be available here.

It is your responsibility to check the website regularly to make sure that you are up-to-date with announcements and with messages sent to your Private Mail address.

LEARNING OUTCOMES

The learning outcomes of this unit are summarised at the start of each section of work. You should revise these after each week to ensure your understanding of the learning objectives.

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: *Communication skills; Critical analysis skills; Problem-solving skills; Creative thinking skills.*

TEACHING AND LEARNING STRATEGY

The unit material is covered in the four hours of lectures each week. The tutorial is an opportunity for you to attempt questions for each section of work, or to ask the lecturer questions. You should also use the Discussion Board to ask questions or discuss concepts covered in the unit.

Week	Week	Topic Covered	Lecturer	Friday Class
	Beginning			
1	1 August	1. Mortality	LT	Tutorial
2	8 August	Pres – Intro + 2. Select mortality	LT	Tutorial
3	15 August	2. Select mortality (continued)	LT	Tutorial
4	22 August	3. Multiple decrement tables	LT	Tutorial
5	29 August	4. Superannuation plans	LT	Tutorial
6	5 September	5. Functions involving two lives	LT	Tutorial
7	12 September	6. Disability Test	LT	Tutorial
STUDY	19 September			
BREAK	26 September			
8	3 October	7. Various products	LT	Tutorial
9	10 October	7. Various products (continued)	LT	Pres – 1
10	17 October	8. Special features	LT	Pres – 2
11	24 October	9. Profit testing I Thursday lab class	SC	Pres – 3
12	31 October	10. Profit testing II Thursday lab class	SC	Consultation
13	7 November	Own revision (no classes)		No class

RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

This unit is assessed using a class test, a group research presentation task and a final examination. This is suitable given the problem-solving and technical nature of the unit, and the importance of clear communication of ideas both in this unit and in your final career.

Test

The test is worth 10% of the final assessment for the unit. The test is scheduled for Tuesday 13 September at 11 pm. and will cover sections 1 to 4 (ie. weeks 1 to 5 inclusive). Marked tests will be returned to ERIC. The class test date, time and coverage may be subject to change – any alterations will be advised on the web site. See below for rules relating to the class test.

Applications for special consideration for the class test due to documented illness or unavoidable disruption must be made on the “Advice of Absence or other Circumstances” form. This is available from <http://www.reg.mq.edu.au/Forms/USSAbsence.pdf> and should be submitted to the Student Enquiry Service on Level 1 of the Lincoln Building. Do not attempt to submit your form directly to the unit convenor. See below for rules relating to applications for special consideration.

Group research presentation task

The group research presentation task is worth 10% of the final assessment for the unit. You will be required to research a topic and make a group presentation to the class. You will also be required to attend other group research presentation sessions. Details of the timing and location of the group research presentations are given above in the Classes section: further details of arrangements for and assessment of the group research presentation task will be provided in lectures.

Exam

The final examination is worth 80% of the final assessment for the unit. It will be a three-hour written paper with ten minutes reading time. The final examination may include multiple choice questions. You should ensure that you bring several 2B pencils and an eraser to the examination.

You will be provided with a copy of the **blue version** of the book *Formulae and Tables for Actuarial Examinations* in the final examination, or photocopies of relevant sections of it. You should familiarise yourself with the tables book prior to the examination as mentioned previously.

The University Examination period in Second Half Year 2005 is from 16 November to 30 November. 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>.

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/>.

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the end of the official examination period.

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.

Rules regarding tests, examinations and other assessment tasks

Normal examination rules apply to the conduct of class tests 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 class tests and the 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. For true/false questions, answers that are not clearly legible as either T or F will be assumed to be wrong and marked accordingly.

You are permitted to bring to the class test and the final examination, **ONE** A4 sheet of paper containing reference material printed on both sides. The sheet may be handwritten, typed or photo-reduced.

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.

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.

Applications for special consideration based on medical grounds (whether for the class test, group research presentation task, or final examination) **must** be accompanied by the Professional Authority Form. Applications omitting this form (such as those which only supply a doctor's certificate) will be ignored.

EXEMPTIONS

The unit ACST345 corresponds to the professional subject 105. **You require a Credit grade or higher to receive the exemption.**

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.

You should attend the Pres-Intro session for important information about how to acknowledge and cite research as part of the group research presentations assessment task.

USE OF COMPUTERS FOR COURSEWORK

Please take careful note of the policy of the Department of Actuarial Studies regarding the use of computers, which follows.

DEPARTMENT OF ACTUARIAL STUDIES NOTICE TO STUDENTS RE USE OF COMPUTERS FOR COURSEWORK

1. Computers do occasionally break down. This is a normal part of working life. When completing assignments, you should not leave computer work until the last moment, assuming the system will be available when you need it.
2. You are the person responsible for keeping backup copies of any data or files you create on a computer. If you fail to keep backup copies, loss of data or files, for whatever reason, is not an acceptable excuse for failing to complete an assignment on time.
3. You should have at least two backups. If you have only one backup disk, then a computer malfunction while you are updating your backups may simultaneously corrupt both the original version (on the hard disk or network) and your backup disk. Do not store your two backups together. Spread your risks.
4. If you are planning to write a document on one computer (eg. your home computer) and print it from a different computer, you should test well ahead of the due date that the second computer can print your document. This particularly applies if your documents incorporate graphs, tables, unusual fonts or special formatting.

UNIVERSITY POLICY ON GRADING

Macquarie University uses the grades HD, D, Cr, P, PC and F for grading the achievements of students in units of study. The meaning of each symbol is explained in section 10 of the Bachelor Degree Rules in the current Macquarie University Handbook of Undergraduate Studies.

Academic Senate has a set of guidelines on the distribution of grades across the range from fail to high distinction. 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 Handbook of Undergraduate Studies 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.

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>.

ERIC

The EFS Resource and Information Centre (ERIC) is located in room C5C 244 and offers photocopying facilities, reading areas and reference material. Class tests will be returned to ERIC.

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://online.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.

INSTITUTE OF ACTUARIES OF AUSTRALIA

You should consider joining the Institute of Actuaries of Australia, if you haven't done so already. There are advantages in joining while a full-time student. Please refer to http://www.actuaries.asn.au/PublicSite/membership2004/membership_frameset.htm for membership information.

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