

DIVISION OF ECONOMICS AND FINANCIAL STUDIES Department of Actuarial Studies

Unit Outline

Semester 2, 2008

ACST255 Contingent Payments 1

Unit Convenor: Xian Zhou (xzhou@efs.mq.edu.au)

Pre-requisites: ACST151(P); ACST200(P); STAT272(P); GPA≥ 2.50, admission

to BCom –Act Stud quota

Credit points: 3 Co-requisites: None

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 covers the analysis of cash flows dependent on uncertain events. Single decrement survival models will be used to analyse the present value of payments under life insurance and annuity contracts. The concepts of pricing and reserving for future contingent liabilities are considered.

A comprehensive understanding of the compound interest and statistical concepts contained in the pre-requisites is assumed. You should review these units as soon as possible if necessary.

The units ACST255 and ACST355 together correspond to the professional subject CT5.

TEACHING STAFF

Lecturer and Unit Coordinator: Dr. Xian Zhou, Room E4A 607, Ex 8566

If you wish to contact Xian Zhou, please do so by sending an email to xzhou@efs.mq.edu.au or via the Mail facility on the unit website.

If you have a question about the course content, please post it on the discussion board on the website. If you are uncertain about some topics, it is likely that other students are also confused. So it may be helpful to all of your fellow students if questions and answers are posted on the website.

Tutors: Weihao Choo weihao.choo@students.mq.edu.au

Michael DonovanMichael.Donovan@efs.mq.edu.auLuke Nicholsluke.nichols@students.mq.edu.au

CLASSES

Lectures are held on

Mondays from 11:00 to 12:00 in W5A T2 Tuesdays from 9:00 to 11:00 in C5C T2

The lectures will NOT be recorded using i-lecture.

Tutorials are held on

Wednesdays from 9:00 to 11:00 in W5A 103

Thursdays from 11:00 to 1:00 in C5A 226

Thursdays from 11:00 to 1:00 in E6A 133

Thursdays from 4:00 to 6:00 in E7B 164

Tutor: Xian Zhou

Tutor: Weihao Choo

Tutor: Michael Donovan

Tutor: Luke Nichols

Tutorials start in Week 1

Tutorial exercises will be available from the unit web site each week.

Tutorial exercises will not be assessed, but they form a very important part of the study and are closely related to assessed components (assignments, class test and the final examination).

Due to classroom constraints you may only attend the tutorial for which you are enrolled. These tutorials are an opportunity for you to work on the week's tutorial questions and to obtain help with them as needed. The more preparation you do for the tutorial, the more you will benefit from the session.

Any alterations to the tutorial times, locations or enrolments will be advised in lectures and/or on the unit webpage.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

Lecture Notes will be posted on the website a few days before each lecture.

The main reading materials (in addition to Lecture Notes) are the ActEd CT5 notes (2008 edition) chapters 1 to 7 inclusive are. This will also be used as background reading for ACST355 in 2009.

A preliminary reading of the ActEd notes before each lecture will considerably enhance the benefits you can gain from the lectures.

The ActEd CT5 notes can be purchased through ASSOC. They are not available from the Co–op bookshop or the library. ASSOC is arranging to buy the Act Ed notes in a bulk purchase, so that a discount will be available. More information about ASSOC can be found at its website http://www.mqassoc.org and contacts with ASSOC can be made via email address phuang@mgassoc.org

UNIT WEB PAGE

The web page for this unit can be found at: http://learn.mq.edu.au

The website will be used extensively for this unit so please consult the web page frequently. You will find administrative updates, lecture notes, tutorials and assignments posted there. Materials posted on the website may be updated from time to time.

It is your responsibility to check the website regularly to make sure that you are up-todate with the information for the unit.

LEARNING OUTCOMES

The discipline-based learning outcomes are as defined in the syllabus for Institute of Actuaries (IA) subject CT5 Chapters 1-7.

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students' generic skills in a range of areas. In this unit we aim to develop problem solving skills, communication skills, and critical analysis skills.

ASSESSMENT

Assessment:

•	Class Test	10%
•	Assignments	10%
•	Final Examination	80%

All students are required to pass the final examination AND have satisfactory performance on the class test in order to obtain a passing grade for the unit.

Assignments:

Two assignments are planned, with each counting for 5% of the assessment. Solutions to the assignments will be posted on the website after they are collected.

Class Test:

There will be one class test scheduled for Tuesday 14 October 2008 during the usual lecture time. It will cover lectures up to and including 16 September 2008.

If there are any changes in test time and/or teaching plans, the announcements of the changes will be posted on the unit website.

During class test, students will be allowed to use

- a calculator (one without text retrieval capability); and
- one A4 page into the exam (the A4 page may have writing on both sides).

Final Examination:

Exam duration: 3 hour exam plus 10 minutes reading time.

The final exam will cover all of the material in the course. Students will be allowed to use

- a calculator (one without text retrieval capability); and
- one A4 page into the exam (the A4 page may have writing on both sides).

Normal examination rules apply to the conduct of the class tests and the final exam. These rules are set out under the heading "Conduct of Examinations" in the Student Information section of the Macquarie University Handbook of Undergraduate Studies (page 43).

STUDENT SUPPORT SERVICES

Besides the general services available (see below), the Division of Economics and Financial Studies offers ERIC: EFS Resource and Information Centre http://www.efs.mg.edu.au/student_support/eric

WEEKLY TABLE OF TOPICS

Week	Topics covered	
1	Review of probability; Introduction to survival models	
2	International Actuarial Notation; Life assurance contracts	
3	Life assurance contracts; Annuities	
4	Annuities; The Life table	
5	The Life table	
6	Evaluation of assurances and annuities	
7	Net premium and reserves	
BREAK		
8	Variable benefits and with-profit policies	
9	Variable benefits and with-profit policies; Class test	
10	Variable benefits and with-profit policies	
11	Gross premiums and reserves for fixed and variable benefit contracts	
12	Gross premiums and reserves for fixed and variable benefit contracts	
13	Additional topics; Revision	

This is only a tentative schedule, and may be revised from time to time as the semester proceeds. Alterations will be advised in lectures and/or via the website.

IMPORTANT GENERAL REQUIREMENT FOR ALL UNITS:

ADVICE OF ABSENCE:

Applications for Special Consideration in respect of a class test or other class assessment task must be made on the "Advice of Absence or Other Circumstances" form. These are available from the Student Enquiry Service on level 1 of the Lincoln Building.

EXAMINATIONS AND SPECIAL CONSIDERATION:

The University Examination periods are from 19/11/2008 to 5/12/08. 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.

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.

No aids, other than a pen and pencil, may be brought into an exam *unless specifically permitted by the Convenor*. The following are expressly forbidden: mobile phones, calculators, computers, I-pods, PDAs, MP3s and any other electronic aid, and books.

After the grades are determined, you may wish to review your paper and/or apply for a review of your grade. The instructions for this will be posted on the Division website http://www.efs.mq.edu.au/student_support/important_processes/important_processes_grade_app_eal_and_exam_script_viewing. Please read this information carefully before submitting a request.

PLAGIARISM AND CHEATING:

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 Disciplinary Committee.

Plagiarism is simply a type of cheating. Any confirmed cheating may result in serious penalties, including deduction of marks, failure in the unit, and/or referral to the University Disciplinary Committee.

UNIVERSITY POLICY ON GRADING:

The grading system is described in section 10.5 of the Bachelor Degree Rules in the Handbook for Undergraduate Studies, available at www.handbook.mq.edu.au/PDFs/2008/ug-bachelor-degree-rules.pdf. You will be given a grade of High Distinction, Distinction, Credit, Pass, Conceded Pass, or Fail

Academic Senate has a set of guidelines on the distribution of grades across the range from fail to high distinction. For an explanation of the policy see:

http://www.mq.edu.au/senate/MQUonly/Issues/Guidelines2003.doc or http://www.mq.edu.au/senate/MQUonly/Issues/detailedguidelines.doc

Your final result will include one of these grades plus a standardized numerical grade (SNG). Your raw mark for a unit may not be the same as the SNG which you receive. Under the Senate guidelines, results may be scaled to ensure that there is a degree of comparability across the university, so that units with the same past performance of their students should achieve similar results. The standard grading scheme is:

0-44 Fail

45 – 49 Conceded Pass

50 – 64 Pass

65 – 74 Credit

75 – 84 Distinction

85 – 100 High Distinction

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

CLASSROOM ETIQUETTE

Students are expected to arrive on time, certainly before five minutes past the hour, and not to leave until the class ends. If you have a recurring problem that makes you late, or forces you to leave early, have the courtesy to discuss this with your lecturer/tutor.

Students are expected to be quiet during lectures unless, of course, class participation is required.

Mobiles should be turned off during classes; not simply set to "silent".