ACST402

Actuarial Control Cycle 1

S1 Day 2018

Archive (Pre-2019) - Dept of Applied Finance and Actuarial Studies

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Disclaimer

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General Information

Unit convenor and teaching staff
Unit Convenor and lecturer
Simon Guthrie
Contact via Contact via iLearn discussion forum or during consultation hours in teaching weeks
Office TBA
Thursday 10-12 during teaching weeks

Lecturer
Bruce Edwards
Contact via In classes or via iLearn discussion forum

Angela Chow
angela.chow@mq.edu.au

Credit points
3

Prerequisites
ACST357 and ACST358

Corequisites

Co-badged status

Unit description
This unit, in conjunction with ACST403 Actuarial Control Cycle 2, develops and applies the actuarial principles and practices underlying the design, assessment, management and control of financial systems in the areas of life insurance, general insurance, superannuation and other less traditional areas of actuarial practice. The two units together consider the process of actuarial and financial management including: product design; pricing; marketing; monitoring of experience; reserve setting; financing; solvency; determination and distribution of surplus; and its role in enterprise risk management. The overall control process is studied within the constraints imposed by the commercial environment and the actuarial professional code of conduct and standards. This includes a discussion of business ethics and issues of professionalism in actuarial practice. Students gaining a grade of credit or higher in all of ACST402, ACST403 and ACST404 are eligible for exemption from Part 2 of the professional exams of the Institute of Actuaries of Australia.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations

Relate the main features within the general environment to medium and long-term commercial decisions

Examine the need for, and impact of, regulation and government policy on medium- and long-term financial decisions

Analyse the main features and risks of financial products and contracts from the point of view of consumers and providers

Demonstrate an understanding of enterprise risk management and its role in organisational management

Discuss and apply the process of product design

Select, describe, critically examine, explain and analyse an appropriate model to solve client problems

Discuss the importance of capital, project future levels of capital, identify risks to capital, and demonstrate an understanding of the interaction between risk and capital

Apply appropriate techniques to the pricing of products and contracts

General Assessment Information

It is the responsibility of students to view their marks for each within session assessment on iLearn within 20 working days of posting. If there are any discrepancies, students must contact the unit convenor immediately. Failure to do so will mean that queries received after the release of final results regarding assessment marks (not including the final exam mark) will not be addressed.

Assessment criteria for all assessment tasks will be provided on the unit iLearn site.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assessed coursework	10%	No	Tuesdays 9 am. or in classes
Case study / report	12%	No	2 May 9 am.

Name	Weighting	Hurdle	Due
Presentation	8%	No	4 April
Final examination	70%	No	Exam period

Assessed coursework

Due: **Tuesdays 9 am. or in classes**
Weighting: **10%**

Textbook Chapter Tasks (4%)

Description

A range of tasks based on the chapters of the textbook, and due 9 am. (Sydney time) most Tuesday mornings (see the Unit Schedule). The first chapter task will be due on Tuesday 6 March (Week 2). Only three of the seven textbook chapter tasks will be marked and graded (and we don't specify which ones in advance).

Submission

Textbook chapter tasks are submitted via the teaching website, and marks and feedback will be returned via the teaching website.

Extensions / penalties

No extensions will be granted. Students who have not submitted the task prior to the deadline will be awarded a mark of 0 for the task, except for cases in which an application for Special Consideration is made and approved.

Discussion contributions (3%)

Description

Students should contribute to the iLearn Discussion Forums by posting answers to discussion questions. Students must make at least 3 postings during the term. Students will earn 1 mark for each posting which satisfactorily engages with the topic. Further information about this assessment task will be provided via iLearn.

Submission

Discussion contributions are submitted via the teaching website, and marks and feedback will be returned via the teaching website.

Extensions / penalties

No extensions will be granted. Students who have not submitted the task prior to the deadline will be awarded a mark of 0 for the task, except for cases in which an application for Special Consideration is made and approved.

Class quizzes (3%)

Description

There will be four random quizzes held during class times. All four quizzes will be marked and a grade will be awarded based on the best three of these four quizzes. The timing of the quizzes will not be notified in advance.

Submission

Quizzes will be submitted during class time, and marks and feedback will be returned via the teaching website.

Extensions / penalties

No extensions will be granted. Students who do not submit a quiz (or are not in classes to complete the quiz) will be awarded a mark of 0 for that quiz. An application for Special Consideration can only be made and approved where the student has been unable to attend classes that lead to fewer than three of the four quizzes being submitted.

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- Demonstrate an understanding of enterprise risk management and its role in organisational management
- Discuss and apply the process of product design
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- Apply appropriate techniques to the pricing of products and contracts

Case study / report

Due: **2 May 9 am.**
Weighting: **12%**

Description

An individual, written, case-study report.

Submission

Submission is via the teaching website, and marks and feedback will be returned via the teaching website.

Extension

No extensions will be granted.

Penalties

There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late (for example, 25 hours late in submission: 20% penalty). This penalty does not apply for cases in which an application for Special Consideration is made and approved. No submission will be accepted after solutions have been posted.

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Presentation

Due: **4 April**
Weighting: **8%**

Description

The presentation is an oral presentation to the class.

Submission

Presentations will be given in lecture classes. Marks and feedback will be returned via the teaching website.

Extension

No extensions will be granted.

Penalties

Students who do not complete the presentation on the scheduled date will be awarded a mark of 0 for the task, except for cases in which an application for Special Consideration is made and approved.

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- Demonstrate an understanding of enterprise risk management and its role in organisational management
- Discuss and apply the process of product design

Final examination

Due: **Exam period**
Weighting: **70%**

Description

The final examination is a three-hour (plus reading time) written examination.

Exam requirements

Non-programmable calculators with no text storage / retrieval capacity permitted. Dictionaries are not permitted.

You are permitted ONE A4 page of paper containing reference material printed on both sides. The material may be handwritten or typed. The page will not be returned to you at the end of the final examination.

You should ensure that your handwriting is legible. Sections of work that are not legible will not be marked.

Extension

No extensions will be granted. The only exception to sitting the examination at the designated time is due to documented illness or unavoidable disruption. In these circumstances you may apply for Special Consideration - details are given in the Policies and Procedures section of this outline. If a supplementary examination is granted as a result of this process, the examination will be scheduled after the conclusion of the official examination period, and you must be

available to sit the examination at the designated time.

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Delivery and Resources

Classes

ACST402 is offered via classes on campus (Macquarie University). Students share lecture classes and a common teaching website with the units ACST731 and ACST831, which are also offered via classes in the Sydney CBD and via distance education throughout the world.

Style of classes

We believe that the best way we can help you to master the Actuarial Control Cycle subject is not by giving traditional lectures where your role is basically to listen, think and take notes. We have planned the face-to-face classes to be like workshops: a mixture of short "micro-presentations", small group work, discussions involving the whole class, and individual activities. Most weeks, we will ask you to do some preparatory work - reading, research, writing or just thinking. If you want to get the most out of the classes, do the preparation, and get involved in the classroom work.

Downloadable lecture recordings

In all weeks, standard recordings of campus lectures using the University's lecture recording facility (ECHO360) will be available. The recordings capture audio and screenshot. Since the classes in this unit are not traditional lectures but contain periods of group discussion, the

recordings will contain some stretches of background noise which you will need to fast forward through. To access the recordings for all weeks, click on the ECHO360 link on the right hand side of the webpage, then select the relevant lecture recording date, then click Play.

Timetable

The timetable for classes can be found on the Macquarie University website at:

http://www.timetables.mq.edu.au

Alterations to the class times or locations will be advised in class and on the teaching website.

Teaching staff

Simon Guthrie is the unit convenor and will be taking four weeks of classes including supervising presentations. Simon can be contacted via Dialogue on the website, or during his consultation hours.

Bruce Edwards will be conducting other classes and supervision of presentations. Bruce is an industry practitioner with a wide range of knowledge across many areas in which actuaries practice. Outside of classes, the forum for interaction with Bruce will be the website Discussion forums.

Hong Xie is the teaching administrator, and can deal with any administrative queries related to the unit. Hong can be contacted via Dialogue on the website.

Assumed knowledge

We assume from the start of the Actuarial Control Cycle that you have acquired the knowledge and skills in subjects CT1 to CT8 of Part I of the Actuaries Institute education program.

Prize

The AMP Prize for Actuarial Control Cycle 1 is awarded for this unit.

Required and recommended texts and materials

Textbook

There is one textbook for this unit, referred to here and elsewhere as UAM:

Bellis, C., Lyon, R., Klugman, S and Shepherd, J. (2010). Understanding Actuarial Management: The Actuarial Control Cycle, 2nd edition, Institute of Actuaries of Australia.

The textbook can be purchased from the Actuaries Institute, at:

http://www.actuaries.asn.au/knowledge-bank/book-shop?id=8

You should buy the book immediately, if you haven't already, as assessment tasks based on the book are due at the beginning of the second week of classes.

Copies of the book are available in the Reserve section of the Macquarie University library.

Other useful articles will be set out at the beginning of each Learning Guide, and made available on the teaching website.

Learning Guide

There is a Learning Guide for each section of work. You should read the Learning Guide in advance of the lectures, and bring a copy with you to classes.

Technology Used and Required

In this unit, you will need to have access to and to be able to use software to produce overhead slides, .pdf documents, and word-processing software to produce reports.

Teaching Website

Course material is available on the online learning management system (iLearn).

The teaching website is integral to this course unit. Passive involvement in this unit greatly reduces the likelihood of achieving the exemption standard of understanding. Interaction with other students and with teachers is very important, and the website is the forum for that interaction.

You will need to be accessing the website regularly to see announcements, read postings and stay informed - at least every couple of days. This is your responsibility and we cannot make any allowances for students who miss important information due to not checking the website regularly.

The website entry page is at:

http://ilearn.mq.edu.au

Teaching and Learning Activities

The unit is taught as set out in the Classes section. The Unit Schedule sets out the assessment and the topics covered in each week of the semester.

Exemptions

The Macquarie University units ACST402/731/831/831 External (Control Cycle 1), ACST403/732/832/832 External (Control Cycle 2) and ACST404/771/871/871 External together count for exemption from the Actuaries Institute Part II subject. You will be recommended for exemption from Part II if you attain grades of Credit or better in these three units. If you attain a Pass in one or more of these units, then the exemption will be recommended if and only if a Standardised Numerical Grade (SNG) of at least 60 is achieved in all three units, and the average SNG is at least 65. For students who have completed part of Part II at a different university, each case is considered individually based on the exemption requirements at those universities.

It is the responsibility of the student to apply to Macquarie University to recommend them to the Actuaries Institute for professional exemptions. For information about this process and links to relevant forms, see:

http://www.businessandeconomics.mq.edu.au/current_students/undergraduate/how_do_i/exemptions_for_professional_examinations

Unit Schedule

Week	Week beginning	Topic	Lecturer	UAM Chapter	Assessment task	Notes
1	26-Feb	Meeting Consumers' Needs	BE	4	-	
2	5-Mar	Product Development	BE	8	TCT1	
3	12-Mar	Regulation	BE	7	TCT2, Discussion contribution 1	
4	19-Mar	Context of Actuarial Work	SG	5, 14(part)	-	
5	26-Mar	Enterprise Risk Management (ERM)	SG	2	TCT3, Discussion contribution 2	No Friday classes due to Good Friday
6	2-Apr	Presentations, ERM (cont.)	BE,SG,SF	2	Presentation	
7	9-Apr	Applying Risk Management	BE	-	TCT4, Discussion contribution 3	
Study break	16-Apr	-	-	-	-	
Study break	23-Apr	-	-	-	-	
8	30-Apr	Capital	BE	11	TCT5, Case study / report	
9	7-May	Capital (cont)	BE	11	-	
10	14-May	Pricing	BE	13	TCT6	
11	21-May	Modelling	SG	9, 10	TCT7	
12	28-May	Pricing (cont)	BE	13	-	
13	4-Jun	Revision	SG	-	-	

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy

- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy *(**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Undergraduate students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/study/getting-started/student-conduct

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

Supplementary Exams/Disruption to Studies

Further information regarding supplementary exams, including dates, is available here http://www.businessandeconomics.mq.edu.au/current_students/undergraduate/how_do_i/disruption_to_studies

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide

appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations
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- Demonstrate an understanding of enterprise risk management and its role in organisational management
- Discuss and apply the process of product design
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- Discuss the importance of capital, project future levels of capital, identify risks to capital, and demonstrate an understanding of the interaction between risk and capital

- Apply appropriate techniques to the pricing of products and contracts

Assessment tasks

- Assessed coursework
- Case study / report
- Presentation
- Final examination

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations
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Assessment tasks

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- Presentation

- Final examination

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations
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Assessment tasks

- Assessed coursework
- Case study / report
- Presentation
- Final examination

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations
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- Assessed coursework
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Changes from Previous Offering

The learning objectives, class format and text are all the same as in the last offering. The Learning Guides, readings, lecture slides and lecture recordings are updated each year. The individual assessments are new each year and the overall assessment structure is also somewhat different to the last offering. There has also been a change in the order in which topics are covered since the last offering, and a change to the unit convenor.

Research and Practice

This unit uses research in several ways.

- This unit uses research by Macquarie University researchers (e.g., current and ex-Macquarie staff members are editors and authors of the main text and other readings)
- This unit uses research from external sources (references will be provided)
- This unit gives you practice in applying research findings in your assignments

Changes since First Published

Date	Description
07/03/2018	Identification of third marker for presentation task Correction of TCT3 week
15/02/2018	Updated reference to exam period for final exam.