



# ACST403

## Actuarial Control Cycle 2

S2 Day 2015

*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

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Credit points

3

Prerequisites

ACST402

Corequisites

Co-badged status

### Unit description

This unit, in conjunction with ACST402 Actuarial Control Cycle 1, 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, and 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
- Apply a Risk Assessment Framework to identify and assess the risks in a range of commercial situations
- Apply relevant approaches and techniques to the valuation of liabilities
- Measure and report emerging profits and/or costs
- Measure, report, and manage Solvency
- Monitor and Assess Experience
- Manage the business and respond to the experience

## General Assessment Information

In order to pass this unit, you must pass the final exam.

A Standardised Numerical Grade (SNG) gives you an indication of how you have performed within the band for your description grade. The SNG is not a mark and you may not be able to work it out from your raw examination mark and other assessment marks. Nor are you able to determine that you are "one mark away" from a different grade.

The Macquarie University units Actuarial Control Cycle 1, Actuarial Control Cycle 2, and Investment Management are accredited by the Actuaries Institute. You will be recommended for exemption from Part 2 of the professional qualifications if:

\* you attain grades of Credit or better in all three units, or

\* you attain an average SNG of 65 or better across all three units, with an SNG of at least 60 in each unit,

The Actuaries Institute sends external examiners to review the performance of borderline students and to verify that appropriate exemption standards have been maintained.

### Extension and Penalties

No extensions will be granted. Late assignments will be accepted up to 72 hours after the submission deadline. A penalty of 20% of the awarded marks will apply for each complete 24 hour period after the due date/time. This penalty does not apply when the student has made an application for special consideration and special consideration has been granted.

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 please refer to [Http://www.businessandconomics.mq.edu.au/current\\_students/undergraduate/how\\_do\\_i/exemptions\\_for\\_professional\\_examinations](http://www.businessandconomics.mq.edu.au/current_students/undergraduate/how_do_i/exemptions_for_professional_examinations)

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Assessed Coursework</u>	5%	No	Weeks 2 to 12 (see Schedule)
<u>Presentation</u>	10%	No	See Instructions
<u>Major Assignment</u>	15%	No	Tuesday September 22 5pm
<u>Final Examination</u>	70%	No	University Exam Timetable

### Assessed Coursework

Due: **Weeks 2 to 12 (see Schedule)**

Weighting: **5%**

Textbook Chapter Tasks

Submission: You must submit textbook chapter tasks from time to time during the term. Submit electronically via iLearn before 5 pm on Tuesday as per the schedule on iLearn.

What is required to complete the unit satisfactorily: Each textbook chapter task requires you to read a chapter of the textbook or a related reading and provide a one-page answer to a question based on the chapter's topic. A sample of these chapter tasks will be marked.

On successful completion you will be able to:

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

situations

- Apply a Risk Assessment Framework to identify and assess the risks in a range of commercial situations
- Apply relevant approaches and techniques to the valuation of liabilities
- Measure and report emerging profits and/or costs
- Measure, report, and manage Solvency
- Monitor and Assess Experience
- Manage the business and respond to the experience

## Presentation

Due: **See Instructions**

Weighting: **10%**

Submission of written material: You should submit the executive outline and a copy of your presentation slides before Sunday October 4 by 5 pm. Submit via iLearn (instructions will be posted).

Submission relating to oral presentation : Students must register their group and topic via iLearn before 5 pm on Tuesday **22 September**. Students will make their presentations during **Week 9** (the week commencing Monday October 5), at an appointed time. The schedule of presentation times will be posted on iLearn.

What is required:

- (a) Written material to be handed in: Preparation of Materials for Class Presentation. Slides and a handout, executive summary for a presentation; and
- (b) An oral presentation

On successful completion you will be able to:

- Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations
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- Manage the business and respond to the experience

## Major Assignment

Due: **Tuesday September 22 5pm**

Weighting: **15%**

Submission: Submit electronically via iLearn before 5 pm on Tuesday September 22 by 5 pm

What is required : Analysis of an actuarial problem (details given on iLearn)

On successful completion you will be able to:

- Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations
- Apply a Risk Assessment Framework to identify and assess the risks in a range of commercial situations
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- Manage the business and respond to the experience

## Final Examination

Due: **University Exam Timetable**

Weighting: **70%**

To be eligible to pass this unit, a pass is required in the final examination.

Examination conditions: The exam will be 3 hours long, with ten minutes reading time.

Normal University examination rules apply. Calculators will be allowed in 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, specifically those with a full alphabet on the keyboard, are not allowed. Calculators may be checked at the commencement of the examination, and the make/model may be recorded.

Dictionaries are not permitted in the final exam, and no reference materials are allowed to be taken into the final exam.

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

Date and location of Examination: The Examination will be conducted during the University examination period. The examination timetable will be published on the University website later in the term. The exam 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.

What is required to complete the unit satisfactorily: To be eligible to pass this unit, a pass is required in the final examination.

On successful completion you will be able to:

- Discuss and apply an Actuarial Control Cycle in a variety of practical commercial situations
- Apply a Risk Assessment Framework to identify and assess the risks in a range of commercial situations
- Apply relevant approaches and techniques to the valuation of liabilities
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## **Delivery and Resources**

### **Classes**

The Actuarial Control Cycle 2 is a co-taught unit, available to both ACST403 and ACST832 students. Lectures are offered in three modes – campus classes (North Ryde), city classes (Sydney CBD) and distance education (students can be located anywhere).

ACST403 on campus classes are:

10:00 to 12:00 Tuesday in C5C Collaborative Forum C5C/230

10:00 to 12:00 Wednesday in C5C Collaborative Forum C5C/230

### **Required and Recommended Texts and/or Materials**

Required texts : Bellis, C, Lyon, R, Klugman, S & Shepherd, J (2010) *Understanding Actuarial Management: the actuarial control cycle*, 2nd edition, Institute of Actuaries of Australia.

Copies of the textbook are available in the Special Reserve section of the library.

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

Additional readings will be posted on iLearn.

### **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, software to produce pdf documents, and word-processing software to produce reports.

### **Downloadable lecture recordings**

The University audio-visual team makes recordings of on-campus lectures. These will be available via iLearn (use the Echo360 tab on the right hand side of the home page).

Some additional recordings will be posted on iLearn in MP4 format.

### **Unit web page**

The web page for this unit can be accessed via the “login” button on <http://ilearn.mq.edu.au>

You should check the website regularly (at least twice a week) to read announcements posted by University staff. Announcements are also posted to your University email account, and you should check your email regularly. This is your responsibility and we cannot make allowances for students who miss important information.

### **Teaching and Learning Strategy**

We assume that you have acquired the knowledge and skills included in the syllabi for the Part I (Core technology) subjects and Actuarial Control Cycle I.

You should prepare for each lecture by reading the relevant chapter of the textbook, the Learning Guide, and any other readings posted on iLearn. We encourage all students to actively participate in class discussions and group work.

## **Unit Schedule**

Week	Commencing	Topic	Lecturer
1	July 27	Valuing Liabilities	Bruce Edwards
2	August 3	Profits	Bruce Edwards
3	August 10	Risk Management	Bruce Edwards
4	August 17	Solvency 1	Shauna Ferris
5	August 24	Solvency 2	
6	August 31	Regal / Occidental Case study	Bruce Edwards
7	September 7	Monitoring Experience 1	Shauna Ferris



Break	September 14		
Break	September 21	Assignments due	
8	September 28	Monitoring Experience 2	Bruce Edwards
9	October 5	Presentations by students	Bruce Edwards, Peter Carroll, Shauna Ferris
10	October 12	Responding to Experience 1	Bruce Edwards
11	October 19	Responding to Experience 2	Bruce Edwards
12	October 26	Professionalism	Peter Carroll
13	November 2	Revision	Shauna Ferris

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

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

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy [http://mq.edu.au/policy/docs/grievance\\_management/policy.html](http://mq.edu.au/policy/docs/grievance_management/policy.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/student\\_conduct/](https://students.mq.edu.au/support/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.m](#)

[q.edu.au](http://www.businessandconomics.mq.edu.au).

### Supplementary Exams

Further information regarding supplementary exams, including dates, is available here

[http://www.businessandconomics.mq.edu.au/current\\_students/undergraduate/how\\_do\\_i/specia/consideration](http://www.businessandconomics.mq.edu.au/current_students/undergraduate/how_do_i/specia/consideration)

## 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](http://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](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use 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
- Apply a Risk Assessment Framework to identify and assess the risks in a range of commercial situations
- Apply relevant approaches and techniques to the valuation of liabilities
- Measure and report emerging profits and/or costs
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- Manage the business and respond to the experience

### **Assessment tasks**

- Assessed Coursework
- Major Assignment
- 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
- Apply a Risk Assessment Framework to identify and assess the risks in a range of commercial situations
- Apply relevant approaches and techniques to the valuation of liabilities
- Measure and report emerging profits and/or costs
- Measure, report, and manage Solvency
- Monitor and Assess Experience
- Manage the business and respond to the experience

## Assessment tasks

- Assessed Coursework
- Major Assignment
- 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
- Apply a Risk Assessment Framework to identify and assess the risks in a range of commercial situations
- Apply relevant approaches and techniques to the valuation of liabilities
- Measure and report emerging profits and/or costs
- Measure, report, and manage Solvency
- Monitor and Assess Experience
- Manage the business and respond to the experience

## Assessment tasks

- Presentation
- Major Assignment
- Final Examination

## Changes from Previous Offering

Learning Guides, readings, and lecture overheads are regularly updated to reflect developments in financial markets and actuarial practice.

## Research

### RESEARCH

This unit uses research in several ways:

\* The unit uses research by Macquarie University researchers (e.g. current and former Macquarie staff members are editors and authors of the textbook 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.