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[\(map GH32, reference G3\)](#)

Course Outline

STAT8048 – Advanced General Insurance

Semester 1, 2012

STUDENTS: Course details change from semester to semester. Please check that you are reading the Course Outline for the correct semester.

Course Description

This is a supervised reading course covering the detailed theoretical and practical understanding of the operation and regulation of the general insurance industry and the actuarial management of risks undertaken by general insurance companies.

Qualifying as a Fellow of the Institute of Actuaries of Australia (IAAust) requires you to pass specialist Part III subjects (4 exams in all). General Insurance is one of specialist subjects available to be attempted. In terms of content, STAT8048 presents a subset of the IAAust General Insurance subject, but it does NOT provide for any exemption whatsoever from any part of the IAAust Part III program.

Graduate Studies Select Classification

Advanced and Specialist.

Contacts

Role	Office address	Email	Telephone	Consultation Times
Lecturer and course convenor <i>Tim Higgins</i>	CBE Bld 26C, Room 4.30	tim.higgins@anu.edu.au	6125 4507	Tuesday 2-4pm. Please feel free to email to arrange a time outside these hours if required.

School Student Administrators <i>Tracy Skinner</i>	CBE Bld 26C, Room 4.50	tracy.skinner@anu.edu.au	6125 0487	
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Communication

Email

If necessary, the lecturer for this course will contact students on their official ANU student email address. Information about your enrolment and fees from the Registrar and Student Services' office will also be sent to this email address.

Announcements

Students are expected to check the Wattle site for announcements about this course, e.g. changes to timetables or notifications of cancellations. Notifications of emergency cancellations of lectures will be posted on the door of the relevant room.

Course URLs

More information about this course may be found on:

- [Study @ ANU](#),
- the [College of Business and Economics website](#), and
- [Wattle](#), the University's online learning environment. Log on to Wattle using your student number and your ISIS password.

Course Information

Learning Outcomes

Upon successful completion of the requirements for this course, students will have a practical understanding of the operation and regulation of the general insurance industry and the actuarial management of risks undertaken by general insurance companies. In particular students will be able to:

1. Explain the main classes of general insurance, the major operations of GI companies, and understand GI accounts.
2. Understand and apply the processes for determining premium rates and pricing of GI policies, including:
 - Risk premiums and sound premiums
 - Risk classification techniques including GLM
 - The role of actuarial valuation techniques
 - Identification of factors to be considered in the premium rating process
 - Apportionment of expenses
3. Understand how reinsurance is applied in the context of GI.
4. Apply a range of valuation techniques for claims experience and estimation of outstanding claims, including:
 - The chain ladder method, payments per claim incurred and finalised, projected case estimate, and bootstrapping approaches
 - Selection of appropriate valuation methods and assumptions
5. Understand the processes for estimation of GI liabilities, including:
 - Philosophy of reserving and valuation
 - Practical issues in calculating outstanding claims liabilities
 - Unearned premium and unexpired risk
6. Understand the issues involved with the measurement and management of solvency and the concept of risk based capital

Course Delivery

A two hour discussion session is provided each week which you are expected to attend. There are no formal tutorials for this course, however, question sets will be made available on Wattle at the end of each week which will be discussed at the start of the following week's discussion session.

Each discussion session will consist of:

- discussion of solutions to the previous week's question sets
- a summary discussion of the textbook and reading material for the week, which in some weeks may include working through in-class examples. Lecture notes that summarise the material for the week will be made available weekly.

The discussion session will be digitally audio recorded when possible and the recordings will be placed on Wattle.

Workload

It is anticipated that students will spend on average 10 hours per week on the course. This includes attending the discussion session, studying the course material, preparing solutions to question sets and assignments and preparing for exams. Students who are finding concepts difficult may need to devote considerably more time to the course. Students will be expected to spend a greater proportion of their time on this course in the lead-up to the assignment and final examination in revising the material and past exam questions or other forms of exam preparation.

Study Schedule

The following schedule is preliminary only – the material may be completed at a faster or slower pace depending on the needs of the class. In addition, one or more discussion sessions may be replaced by guest lectures from visiting actuaries depending on availability.

While the required student preparation for each discussion session mainly lists chapters from the textbook, other reading may be assigned from time to time. This will be announced in lectures and information will be posted on Wattle. In addition, students will derive greater benefits from the discussion sessions if they attempt the question sets made available each week.

The readings from Hart et al. are indicative only, and may be updated as the semester progresses. Students will be informed if and when the required reading changes.

Week beginning	Learning outcome	Activity	Required student readings (textbook and other readings)
Week 1 20 February	1	Discussion session: Introduction to the course and syllabus	
Week 2 27 February	1	Discussion session: Introduction to the general insurance market 1	• Hart et al.: Chapters 1, 2(pp. 31-35) and 3(pp. 57-71).
Week 3 5 March	1	Discussion session: Introduction to the general insurance market 2	• Hart et al.: Chapters 3(pp. 71-78) and 5.
Week 4 12 March	2	Discussion session: Premium rating and pricing 1	• Hart et al.: Chapters 19, 22, 23 and 24 (pp. 455 – 465)
Week 5 19 March	2	Discussion session: Premium rating and pricing 2	• Hart et al.: Chapter 14 (pp. 231-235, 241-242, 252-253)

Week beginning	Learning outcome	Activity	Required student readings (textbook and other readings)
Week 6 26 March	2	Discussion session: Premium rating and pricing 3	<ul style="list-style-type: none"> Hart et al.: Chapter 34.
Week 7 2 April	3	Discussion session: Reinsurance and revision for mid-semester	<ul style="list-style-type: none"> Hart et al.: Chapters 4, 37, 38 and 39.
Week 8 23 April	3	Discussion session: Reinsurance continued Mid-semester Exam	
Week 9 30 April	4	Discussion session: Valuation techniques	<ul style="list-style-type: none"> Hart et al.: Chapters 16 (<i>not</i> pp. 307-315) and 27.
Week 10 7 May	5	Discussion session: Estimation of insurance liabilities 1	<ul style="list-style-type: none"> Hart et al.: Chapters 17, 28
Week 11 14 May	5	Discussion session: Estimation of insurance liabilities 2	<ul style="list-style-type: none"> Hart et al.: Chapters 18, 26 and 36. APRA Prudential Standard GPS 310 – <i>Audit and Actuarial Reporting and Valuation</i>.
Week 12 21 May	6	Discussion session: Solvency and capital adequacy	<ul style="list-style-type: none"> Hart et al.: Chapter 30. APRA Prudential Standard GPS 110 – <i>Capital Adequacy</i>
Week 13 28 May		Discussion session: Revision	

Assessment

Proposed Assessment Schedule

Details about assessment may change during the first two weeks of semester. Please ensure that you check with your lecturer or tutor about any changes. Changes to the assessment schedule will be posted to the Wattle site. Further details regarding the assessment of the course will be announced in lectures and on Wattle.

Assessment item	Description and detail	Due Date	Weighting (%)
Assignment	To be provided on Wattle early in semester	Monday, 23 April (Week 8)	20%
Mid-Semester Exam	Written exam of ~2 hour duration	Week 8. Date to be announced	20%
Final Exam	Written exam of 3 hour duration	Final exam period	60%

The assignment is compulsory and non-redeemable.

The following formula will be used to determine your final **raw** score:

$$20\% \times \text{Assignment mark} + 20\% \times \text{Mid-semester exam result} + 60\% \times \text{Final exam result}$$

Exams

The mid-semester exam will be held in week 8 and will be based on material covered prior to the mid-semester break. Permitted material will be the course textbook and a non-programmable calculator.

The final exam will take place during the regular exam period and will be 3 hours in length. Permitted material will be the course textbook, APRA Prudential Standards, and a non-programmable calculator. Further information will be provided to students via Wattle and in lectures.

Scaling

Your final mark for the course will be based on the **raw** marks allocated for each assignment or examination. However, your final mark may not be the same number as produced by that formula, as marks may be **scaled**. Any scaling applied will preserve the rank order of raw marks (i.e. if your raw mark exceeds that of another student, then your scaled mark will exceed the scaled mark of that student), and may be either up or down.

Learning Outcomes-Assessment

Course Learning Outcomes	Assignment 1	Mid-semester Exam	Final Exam
The six specific learning outcomes listed above are given here alongside the assessment items. This indicates whether the learning outcome is covered in each assessment piece.			
1	yes	yes	yes
2	yes	yes	yes
3	no	yes	yes
4	no	no	yes
5	no	no	yes
6	no	no	yes

Assignment Details

Due Date	5pm, Monday, 23 April (week 8)
Value or Weighting (%)	20%
Suggested Length	As directed in the assignment question to be placed on Wattle.
Instructions	As directed in the assignment question to be placed on Wattle.
Purpose	To conduct research into the General Insurance market beyond the material covered in the text book.
Marking Criteria	As listed in the assignment question to be placed on Wattle.
Submission	Uploaded to Wattle

Penalties

Penalties will be imposed on late submission of the assignment. 10% of the maximum grade possible will be deducted for each day that the assignment is late. If an assignment is submitted on the due date, but after the 5pm deadline, it will be treated as if it is one day late. After 10 days, a grade of zero will be assigned.

Texts and Other Reading

Prescribed Texts

Hart, Buchanan and Howe, *Actuarial Practice of General Insurance*, Institute of Actuaries of Australia, 7th Edition, 2007.

This is available from the Institute of Actuaries of Australia. Instructions on obtaining a copy of the textbook will be discussed in the first week of semester.

Supplementary Reading

Any supplementary reading will be made available through Wattle and/or given out in the discussion sessions.

Technology, Software, Equipment

Students will be required to supply a calculator. A basic knowledge of Microsoft WORD and EXCEL is assumed.

University subscription to the Institute of Actuaries

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>.

General Information for all Students

General Information for all students has been included on Wattle.