ACTL 4001/5100

ACTUARIAL THEORY & PRACTICE A

Course Outline
Semester 1, 2016

Part A: Course-Specific Information

Please consult Part B for key information on Business School policies (including those on plagiarism and special consideration), student responsibilities and student support services.
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PART A: COURSE-SPECIFIC INFORMATION

This course outline covers ACTL4001 & ACTL 5100, which will be delivered in Semester 2 and also covers some of the information provided for ACTL4002 & ACTL5200 (Actuarial Theory & Practice B), which will be delivered in Semester 2.

1 STAFF CONTACT DETAILS

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
<th>Room</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturer-in-charge</td>
<td>Associate Professor Anthony Asher</td>
<td><a href="mailto:a.asher@unsw.edu.au">a.asher@unsw.edu.au</a></td>
<td>Business School Building 650</td>
<td>9385 7619</td>
</tr>
</tbody>
</table>

Consultation times: By appointment, before lectures, or Thursday between 16.00 – 17.00, but may be amended by notices on Moodle, which is where all details in respect of the courses can be found. (See section 5 below for details.) Written queries should be made in the discussion forums on Moodle so that all students can see the responses. There will be no response to subject related questions on private emails.

There will be guest lecturers with significant experience in financial institutions to provide background knowledge on the operation of particular markets.

2 COURSE DETAILS

2.1 Teaching Times and Locations

ACTL4001 & ACTL5100 lectures will be held at the Kensington campus at times and in lecture rooms as shown in myUNSW. In Semester 1, 2016, they are scheduled for Webster Lecture Theatre B on Tuesdays.

Except for weeks 1, 6, 12 and 13, the format of the face to face learning will be:

<table>
<thead>
<tr>
<th>Time</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>5pm through to 6:30pm</td>
<td>ACTL4001</td>
</tr>
<tr>
<td>6:30 pm through to 7:30pm</td>
<td>Both</td>
</tr>
<tr>
<td>7:30 pm through to 9:00pm</td>
<td>ACTL5100</td>
</tr>
</tbody>
</table>

In weeks 1, 6, 12 and 13 all students should attend from 6pm through to 8pm.

2.2 Units of Credit

The course is worth 6 units of credit. This course is available to 4th year combined degree, Honours and Co-op undergraduate students, and Master of Actuarial Studies and non-award postgraduate students. The undergraduate and postgraduate classes
will be combined for the lecture, but separate tutorials will be held. The assessment is the same for both classes.

2.3 Summary of Course

The Actuarial Theory & Practice courses develop the theory and practice underlying the actuarial management of financial institutions. The courses particularly cover applications in life, health and general insurance, superannuation and banking where actuaries are involved in product design, pricing, reserving, risk, investment and surplus management. The courses emphasise students’ ability to bring together what they have learnt in the undergraduate courses in order to make professional judgements.

2.4 Course Aims and Relationship to Other Courses

The courses consider the practical application of the concepts covered in the Part I courses covered in the first 3 years actuarial courses at UNSW. The Actuarial Theory & Practice courses, together with ACTL4303/ACTL5303 Asset and Liability Management cover the part II requirements of the Institute of Actuaries of Australia (Actuaries Institute). Students who obtain over 75% average for these three courses will be recommended for Part II exemption. This means that they can qualify for the actuarial designation after three years of appropriate practical experience, and the completion of a final professionalism course.

In Part II, the Actuaries Institute expects students “to develop a holistic approach to practical problem solving, and develop a level of judgement and professional skills required to successfully apply actuarial principles”.

The main aim of these courses is therefore to prepare students to take a professional approach to the actuarial management of a financial institution:

- Product development and pricing
- Valuation of assets and liabilities and the determination of capital
- Application of the Actuarial Control Cycle to meet commercial and regulatory objectives
- Enterprise risk management

There will be references to professionalism, ethics and the ability to make reasoned argument, throughout the course.

2.5 Student Learning Outcomes

The Course Learning Outcomes are what you should be able to DO by the end of this course if you participate fully in learning activities and successfully complete the assessment items.

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all coursework students in the Business School. Program Learning Goals are what we want you to BE or HAVE by the time you successfully complete your degree (e.g. ‘be an effective team player’). You demonstrate this by achieving specific Program Learning Outcomes - what you are
able to DO by the end of your degree (e.g. ‘participate collaboratively and responsibly in teams’).

For more information on the Program Learning Goals and Outcomes, see Part B of the course outline.

<table>
<thead>
<tr>
<th>Business Undergraduate Program Learning Goals and Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge: Our graduates will have in-depth disciplinary knowledge applicable in local and global contexts. You should be able to select and apply disciplinary knowledge to business situations in a local and global environment.</td>
</tr>
<tr>
<td>2. Critical thinking and problem solving: Our graduates will be critical thinkers and effective problem solvers. You should be able to identify and research issues in business situations, analyse the issues, and propose appropriate and well-justified solutions.</td>
</tr>
<tr>
<td>3. Communication: Our graduates will be effective professional communicators. You should be able to:</td>
</tr>
<tr>
<td>a. Prepare written documents that are clear and concise, using appropriate style and presentation for the intended audience, purpose and context, and</td>
</tr>
<tr>
<td>b. Prepare and deliver oral presentations that are clear, focused, well-structured, and delivered in a professional manner.</td>
</tr>
<tr>
<td>4. Teamwork: Our graduates will be effective team participants. You should be able to participate collaboratively and responsibly in teams, and reflect on your own teamwork, and on the team’s processes and ability to achieve outcomes.</td>
</tr>
<tr>
<td>5. Ethical, social and environmental responsibility: Our graduates will have a sound awareness of the ethical, social, cultural and environmental implications of business practice. You should be able to:</td>
</tr>
<tr>
<td>a. Identify and assess ethical, environmental and/or sustainability considerations in business decision-making and practice, and</td>
</tr>
<tr>
<td>b. Identify social and cultural implications of business situations.</td>
</tr>
</tbody>
</table>

learning outcomes:

1. Discuss and Apply an Actuarial Control Cycle in a Variety of Practical Commercial Situations
2. Apply the Tests of Professionalism
3. Relate the Main Features within the General Environment to Medium and Long Term Commercial Decisions
4. Examine the Need for and Impact of Regulation and Government Policy on Medium and Long Term Commercial Decisions
5. Analyse the Main Features and Risks of Financial Products and Contracts, from the Point of View of Consumers and Providers
6. Demonstrate an Understanding of Enterprise Risk Management and its Role in Organisational Management
7. Apply a Risk Assessment Framework to Identify and Assess the Risks in a Range of Commercial Situations
8. Discuss and Apply the Process of Product Design
9. Select an Appropriate Model to Solve Client Problems
10. Recognise the Importance of Capital
11. Apply Relevant Approaches and Techniques to the Valuation of Liabilities  
12. Apply Appropriate Techniques to the Pricing of Products and Contracts  
13. Measure, Report and Manage Solvency  
14. Measure and Report Emerging Profits and/or Costs  
15. Monitor and Assess Experience  
16. Manage the Business and Respond to the Experience”

In addition, you will be expected to:

17. Concisely put forward your considered views on a topic in writing and verbally  
18. Record and reflect on your contribution to teamwork

The following table shows how your Course Learning Outcomes relate to the overall Program Learning Goals and Outcomes, and indicates where these are assessed (they may also be developed in tutorials and other activities):

<table>
<thead>
<tr>
<th>Program Learning Goals and Outcomes</th>
<th>Course Learning Outcomes</th>
<th>Course Assessment Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course helps you to achieve the following learning goals for all postgraduate coursework students:</td>
<td>On successful completion of the course, you should be able to:</td>
<td>This learning outcome will be assessed in the following items:</td>
</tr>
</tbody>
</table>
| 1 | Knowledge | • 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  
• Demonstrate an Understanding of Enterprise Risk Management and its Role in Organisational Management  
• Apply a Risk Assessment Framework to Identify and Assess the Risks in a Range of Commercial Situations  
• Discuss and Apply the Process of Product Design | • Assignment  
• Exams |
| 2 | Critical thinking and problem solving | • Examine the Need for and Impact of Regulation and Government Policy on Medium and Long Term Commercial Decisions  
• Analyse the Main Features and Risks of Financial Products and Contracts, from the Point of View of Consumers and Providers  
• Apply Appropriate Techniques to the Pricing of Products and Contracts  
• Manage the Business and Respond to the Experience | • All assessment items |
| 3a | Written communication | • Concisely put forward your considered views on a topic in writing | • Assignment  
• Re-written answers  
• Exams |
| 3b | Oral communication | • Concisely put forward your considered views on a topic verbally | • Class participation |
3 LEARNING AND TEACHING ACTIVITIES

3.1 Approaches to Learning and Teaching in the Course

Students are encouraged to become deep learners. As a deep learner, you would have taken responsibility for your own learning, and have chosen to become interested in the subject for its own sake rather than merely to pass the exams. You will be developing your own personal opinions on the subject, and will go on learning and thinking throughout life. Students may find it helpful to use the Biggs study process questionnaire on Moodle to understand the extent to which you are a deep learner.

There are many facts to learn about the context of actuarial work and these will be covered in the readings and in the lectures. Both readings and lectures will, however, also expose students to different opinions and you will be expected to develop your own views on the difficult and sometimes controversial questions that actuaries have to address in practice. In many cases, there are no right answers.

This could be described as a guided self-learning approach, and is expected to provide a greater depth of understanding of the concepts compared to lectures that only involve lecturers talking. The ultimate aim is for you to see yourself as a member of the actuarial (or related) profession and be able to apply your knowledge to new situations encountered in the financial sector.

3.2 Learning Activities and Teaching Strategies

The strategy for the course involves:

- Students preparing for a lecture by reading and thinking about the relevant material, and identifying issues they are uncertain of for discussion in the class. A weekly quiz highlights the main issues, provides immediate feedback on basic misunderstandings, and provides a discipline so that all students are prepared to contribute to tutorials and lectures. There is also a weekly personal reflection to consider the personal applications of the work covered.
- Lectures highlighting the main implications and dealing with difficult concepts, accompanied by discussion where the class is expected to contribute and to provide feedback to the Lecturer-in-Charge that the topics have been understood.
- Presentations where the student is expected to research a topic and then develop a short presentation for their peers, followed by a response from another student and discussion by the class. This also allows for feedback, and discussion of the broader context of the issue addressed by the presentation.
- Re-written answers of the midsession examination to give more detailed feedback on critical thinking and written communication.
The period when all students are present will include:

- Any announcements relevant to the course (which will also be on Moodle)
- The lecture by the Lecturer-in-Charge or guest
- Small group discussions

The periods when only one group of students is present will include:

- Student presentations
- Discussion
- Feedback on what students learnt during the discussion

The course textbooks, lectures and assessment tasks are designed to provide a framework for your learning. Every student has a different approach to learning. How much time you spend on reading in preparation for lectures, completing assessment tasks, reviewing course objectives, deepening your understanding and preparing for final examinations will depend on your learning approach. Lectures and class discussions will cover the main concepts and issues and will not necessarily cover all the details of the course readings or texts.

Your private study is the most important component of this course. Weekly readings, reviewing key concepts, and your own topic summaries should be considered as a basis of a regular private study regime. Keeping up to date is very important and each week builds on the prior week so it is important that you have your study regime organised early.

4 ASSESSMENT

4.1 Formal Requirements

In order to pass these courses, you must:

- achieve a composite mark of at least 50%; and
- make a satisfactory attempt at all assessment tasks.

In order to gain an exemption from the Institute of Actuaries of Australia Part II course you must obtain an average 75% in ACTL4001, ACTL4002 and ACTL4303 or ACTL5100, ACTL5200 and ACTL5303.

4.2 Assessment Details

**ACTL4001/ACTL5100**

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Weighting</th>
<th>Length</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midsession exam</td>
<td>10%</td>
<td>1 hour</td>
<td>Week 6</td>
</tr>
</tbody>
</table>
### 4.3 Class participation

Class participation will consist of:

1. A formal oral presentation or proposer or oppose in a debate, plus
2. A response to an oral presentation or a second speaker in a debate, plus
3. A brief outline of your thoughts on the weekly personal reflections.

The presentations/debates and responses, are intended to develop your ability to be clear and focused in oral presentations, particularly in your ability to engage with an audience. It will also develop your skills in research: being able to select and apply disciplinary knowledge to business situations. You are expected to spend 4 or 5 hours preparing, but will only have 6 minutes to present/speak. You will be stopped after 6 minutes. Some topics will require some research of your own; others refer to specific papers, which you will need to summarise. Wikipedia is often a useful source, but you must check references. Some of the topics can be answered easily, but you are expected to give background and reasoning for your answer. Other topics are more complex, and so the extent and depth of your research will necessarily be limited by the time available.

Presentation and debate topics are as set out in this Course Outline. Students may indicate their preferences for topics to the Lecturer-in-Charge by email before 26 February for S1 and 23 July for S2. A schedule of presenters and responders will be placed on Moodle soon after. Students may agree between themselves to swap presentations provided both students involved notify the Lecturer-in-Charge at least 1 week before the first presentation is due. You may also suggest a replacement topic on which you would like to present, but it must be agreed by the Lecturer-in-Charge first.

Presentations and debate speeches in the first semester must include no more than 9 PowerPoint slides (including a slide giving references). Slides must be numbered and a draft copy must be sent to the Lecturer-in-Charge by the Wednesday before the presentation, and the final version given to the Lecturer-in-Charge to be loaded onto

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<table>
<thead>
<tr>
<th>Class participation</th>
<th>10%</th>
<th>6 minutes presentation plus</th>
<th>As scheduled on Moodle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly quiz</td>
<td>5%</td>
<td>Varies</td>
<td>Each week</td>
</tr>
<tr>
<td>Re-written answers</td>
<td>5%</td>
<td>500 words</td>
<td>Weeks 7 to 11</td>
</tr>
<tr>
<td>Assignment</td>
<td>10%</td>
<td>4 pages, 20 minutes and reflection</td>
<td>Week 10</td>
</tr>
<tr>
<td>Final examination</td>
<td>60%</td>
<td>2 hours</td>
<td>As advised by UNSW</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Whilst feedback will be provided to students after their assessment tasks have been completed, students should note that the final assessment can involve scaling of overall marks to adjust for varying difficulty across years and to adjust for variations in marking standards of different examiners. This scaling will be overseen by an external reviewer appointed by the Institute of Actuaries of Australia, who will assess the results and needs to agree on the overall level of marks.
Moodle by Thursday after the presentation. The draft will be sent to the other side of the debate or to the respondent. The final version will be loaded on Moodle.

First and second speakers are expected to have met at least twice to discuss the topic. Debaters do not have to use slides, but if they do not must provide a brief summary of their points to the Lecturer-in-Charge.

Marking rubrics will be placed on the Moodle site, but grading for presentations will take into account the clarity of your communication and whether you have engaged the audience with your enthusiasm for the topic and your awareness of them and their interests. Marks will be deducted for failing to:

- make adequate preparation
- provide slides/ notes of your presentation to the Lecturer-in-Charge
- finish at the 6 minute mark

For both presentations and debates, you are not being evaluated on whether your analysis is comprehensive or not, but on engagement and persuasion. You will therefore lose marks if you rush through the presentation to finish on time. Focus on engaging the audience with the critical points you want to make.

Responders to presentations are expected to thank presenters, comment on what they found particularly interesting and ask one or two questions. Second speakers are expected to address weaknesses in the first speakers’ speeches. Both will be stopped after 2 minutes.

In addition, students will be called at random to comment on the weekly personal reflections. If you are not going to be present, please ask another student to answer on your behalf. No penalties will be incurred on the first two such occasions.

The class participation mark will be allocated 80:10:10 to 1, 2 and 3 above.

4.4 Weekly quiz

There will be a short weekly multiple choice quiz to ensure that all students are up to date with their accumulation of knowledge, and able to contribute to tutorials and lectures. The questions allow for multiple attempts but there will be a 20% penalty on the second attempt. Students must get all the questions right to be given the marks for the week, each of which will be equally weighted. A copy of all the comments will be made available after each complete attempt.

If you disagree with any of the answers, you may email the Lecturer-in-Charge before the lecture with your reasons. You will then not be penalised for a wrong answer.

4.5 Re-written answers

Model answers are not provided for questions in the course in order to emphasise students’ responsibility for developing their own, critical, thinking. In order also to develop your writing skills and better understand the requirements of the course, students are to choose one question from the mid-semester examination and prepare a model answer of less than 500 words to be submitted by the end of week 8. This is to have already been reviewed by a member of your assignment group (not the person
who reviews yours), and submitted in a word document to the Lecturer-in-Charge. Peer reviewers will be expected to reply within 3 working days and look for spelling and grammatical errors, and lack of clarity in the re-written answers.

You will be given feedback on their result on the word document, and asked to re-write as many times as necessary to develop a “model answer”. The re-writes will not need to be reviewed. Your changes each time need to be shown in “track changes” in Word. Full marks will be given for acceptable answers completed by the end of week 11, but marks will be deducted for inadequate attempts, or failure to adequately review your team member’s submission.

4.6 Mid-Session & Final Exams

The exam content and the answers are reviewed by a representative of the Actuaries’ Institute. The exams are intended to test your knowledge of the material covered as well as your ability to concisely express yourself. You will be expected to be able to apply material learned to different situations. In ACTL4002 and ACTL5200, questions may relate to these courses and to material covered in ACTL4001 and ACTL5100.

The examinations will not directly assess material in Working Ethically in Finance, but it is required for the other assessments in the course.

4.7 Assignment

The assignment is intended to promote engagement with the problems and opportunities available in the financial sector, and to develop your skills in research and ability to concisely and coherently present your ideas, as well as working in groups. You are expected to spend 8 to 10 hours on the assignment. The questions are set out below.

Students must join a group of 3 or 4 and notify the Lecturer-in-Charge of their group name and members (or their failure to find a group and the topic of their preferred plan) by the end of week 2 for S1. For S2, students will be allocated to a group in the first week. The Lecturer-in-Charge may re-assign some group members later.

The group must meet enough times for each member to have a chance to chair the meeting and to take the minutes (but not when that are chairing). Different members must be allocated different tasks on which they must report progress at least once. Any data collected or calculations made must be checked by a different member of the group.

Your group report must be in 11 point Arial font on A4 paper. It should include no more than two pages of minutes and three pages of report. (If you have an internal group dispute over the minutes, the dissenting party or parties can include a comment as to the reason for their dissent attached to the offending item). The purpose of the minutes is to help you get into the productive habit of documenting what is agreed, and also allows for differential marks if it appears that members have contributed at different levels.

Each member must also attach a personal reflection of no more than one page reflecting on the functioning of the group, the different contributions made by different members, and your opinion on the quality of the report. While you may share your
personal reflections with each other, they will be penalised if they resemble each other closely.

Assignment reflections must be submitted via Moodle by midnight of the Saturday of week 10, with hard copies to be handed in at the following lecture. The group report should be attached by the group member with the lowest student number and also handed in with the hard copies. Students should keep a copy of all work submitted for assessment and to keep their returned marked assignments.

Rubrics for grading (and their weighting) will be placed on Moodle and will take into account:

- The content of your report; whether it demonstrates some innovative research, careful analysis and professionalism
- The structure and clarity of your report
- Whether team meetings (the minutes you took) been appropriately documented
- Whether you appear to have made a positive contribution to the team
- Your insights into the functioning of the team and the strengths of other members

The topic for ACTL4001/5100 is:

Read chapter 6 of *Working Ethically in Finance*, and compare the returns on shareholders' equity earned by companies in the financial sector with those in other sectors of the economy of Australia or another country. Answer the following:

- Do you find evidence of economic rents in the finance sector?
- Have you allowed appropriately for the risk of periodic losses? Does your data cover a full economic cycle of profits and losses?
- If there are economic rents, could they be the result of entrepreneurial activity?
- If there seem to be economic rents that arise from overcharging:
  - What are the obstacles to entry into the markets? How might they be reduced?
  - Should those responsible for overcharging be required by regulation to exercise restraint?

4.8 Late Submission

Late submissions will not be marked. Students are referred to part B of the course outline for the School's special consideration policy.
Quality Assurance

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential.

5 COURSE RESOURCES

The required reading for this course is:


Other papers and resources that are considered relevant will be available on Moodle. https://moodle.telt.unsw.edu.au/login/index.php

The Moodle site for this course will contain the Course Outline, presentations made by lecturers, presentations made by students, and any notices relevant to this course. It is important that you visit the site regularly to see any notices posted there by the Lecturer-in-Charge – and are able to regularly read the emails sent by Moodle.

6 COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students and other stakeholders about the courses offered in the School and continual improvements are made based on this feedback. UNSW's Course and Teaching Evaluation and Improvement (CATEI) Process is one of the ways in which student evaluative feedback is gathered. In this course, we will seek your feedback through end of semester CATEI evaluations.

Feedback from previous students indicated that they have most difficulty in understanding what is required of them in providing judgements where there is more than one acceptable answer. There are therefore no one model answer to exam questions that can be learnt and repeated. As a result of this feedback, the main innovation has been the introduction of the rewriting exercise, where students themselves create an answer that deserves full marks.

In response to requests for fewer assessments, the portfolio assignment will be covered in lectures and class presentation topics.
7 COURSE SCHEDULE

The topics to be discussed and the reading will be:

<table>
<thead>
<tr>
<th>Week beginning</th>
<th>Topic</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction to the course and learning methods</td>
<td>UAM Chapter 1,19</td>
</tr>
<tr>
<td>29 February</td>
<td></td>
<td>WEF Part 1</td>
</tr>
<tr>
<td>Week 2</td>
<td>General economic &amp; commercial environment for financial institutions in Australia &amp; professionalism</td>
<td>UAM Chapters 3, 5</td>
</tr>
<tr>
<td>7 March</td>
<td></td>
<td>WEF Chapters 4, 5</td>
</tr>
<tr>
<td>Week 3</td>
<td>The General insurance industry &amp; some pricing theory [Guest lecture]</td>
<td>UAM Chapter 13</td>
</tr>
<tr>
<td>14 March</td>
<td></td>
<td>WEF Chapter 6</td>
</tr>
<tr>
<td>Week 4</td>
<td>The banking industry and financial product design</td>
<td>UAM Chapter 8</td>
</tr>
<tr>
<td>21 March</td>
<td></td>
<td>WEF Chapter 9</td>
</tr>
<tr>
<td></td>
<td>Mid-semester break: Good Friday 25th March – Sunday 3rd April</td>
<td></td>
</tr>
<tr>
<td>Week 5</td>
<td>The Superannuation &amp; funds management industries and fiduciary duties [Guest lecture]</td>
<td>Super in Australia (Wikipedia)</td>
</tr>
<tr>
<td>4 April</td>
<td></td>
<td>WEF Chapter 7</td>
</tr>
<tr>
<td>Week 6</td>
<td>Midsemester exam</td>
<td>Revision</td>
</tr>
<tr>
<td>11 April</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 7</td>
<td>Profit and the life insurance industry</td>
<td>UAM Chapter 16</td>
</tr>
<tr>
<td>18 April</td>
<td></td>
<td>WEF Chapter 8</td>
</tr>
<tr>
<td>Week 8</td>
<td>People’s needs for financial products and the health insurance industry [Guest lecture]</td>
<td>UAM Chapter 4</td>
</tr>
<tr>
<td>Week 9</td>
<td>Features &amp; risks of financial contracts &amp; types of risks</td>
<td>UAM Chapters 2, 6</td>
</tr>
<tr>
<td>2 May</td>
<td></td>
<td>Kelliher et al</td>
</tr>
<tr>
<td>Week 10</td>
<td>Interrelationships between pricing, capital, reinsurance policy conditions, underwriting, profits</td>
<td>UAM Chapters 11; 13; 16 Assignment Due</td>
</tr>
<tr>
<td>9 May</td>
<td></td>
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</tr>
<tr>
<td>Week 11</td>
<td>The role of regulation in the financial sector [Guest lecture]</td>
<td>UAM Chapter 7</td>
</tr>
<tr>
<td>16 May</td>
<td></td>
<td>WEF Chapter 10</td>
</tr>
<tr>
<td>Week 12</td>
<td>Review</td>
<td>Revision</td>
</tr>
<tr>
<td>23 May</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 13</td>
<td>Revision tutorial</td>
<td></td>
</tr>
<tr>
<td>30 May</td>
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<tr>
<td>Week beginning</td>
<td>Topic</td>
<td>Reference</td>
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<tr>
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<tr>
<td>Week 1 25 July</td>
<td>Valuing Liabilities</td>
<td>UAM Chapter 12</td>
</tr>
<tr>
<td>Week 2 1 August</td>
<td>Financial institution solvency &amp; profits</td>
<td>UAM Chapters 15; 16</td>
</tr>
<tr>
<td>Week 3 8 August</td>
<td>Risk management in a financial institution</td>
<td>WEF Chapters 11; 14</td>
</tr>
<tr>
<td>Week 4 15 August</td>
<td>Data issues – big and small [Guest lecture]</td>
<td>UAM Chapter 10</td>
</tr>
<tr>
<td>Week 5 22 August</td>
<td>Midsemester exam</td>
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<tr>
<td>Week 6 29 August</td>
<td>Monitoring financial experience</td>
<td>UAM Chapter 17</td>
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<tr>
<td>Week 7 5 September</td>
<td>Extreme events [Guest lecture]</td>
<td>IAA Stress Testing Haldane &amp; Madouras</td>
</tr>
<tr>
<td>Week 8 12 September</td>
<td>Responding to experience and more on reinsurance</td>
<td>UAM Chapter 18</td>
</tr>
<tr>
<td>Week 9 19 September</td>
<td>Assessing financial models</td>
<td>UAM Chapter 9</td>
</tr>
</tbody>
</table>

Mid-semester break: Saturday 24 September – Sunday 2 October

| Week 10 3 October | Managing risk, stress tests and recovery plans | IAIS Solvency & Stress Test Assignment Due |
| Week 11 10 October | Professionalism and vocation [Guest lecture] | WEF Chapters 12; 13 |
| Week 12 17 October | Review | Revision |
| Week 13 24 October | Revision tutorial | |
8 Presentation and Debate Topics

Semester 1

<table>
<thead>
<tr>
<th>S1 Week 2</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Debate 1</td>
<td>Actuaries have a professional responsibility to be involved in the debate on what should be done about climate change</td>
</tr>
<tr>
<td>Debate 2</td>
<td>The law against conflicts of interest is irrelevant; agency risk is managed by aligning incentives</td>
</tr>
<tr>
<td>Topic 1</td>
<td>Outline the growth of the assets of the insurance, banking, and superannuation industries in Australia over the last 25 years and explain changes to their composition.</td>
</tr>
<tr>
<td>Topic 2</td>
<td>Is the analysis of surplus a key element of the actuarial control cycle?</td>
</tr>
</tbody>
</table>

For personal reflection

Read a Traditional Model of Justice (pages 39-45), and Communities (pages 177-179). To what extent do you belong to personal communities that are just? Consider the extent to which you give members of your household or wider family their due, and they give you yours. If you find no instances of injustice in your personal communities, extend the question to wider communities in which you participate. Once you have identified an injustice, read Restorative Justice and Re-integrative Shaming (pages 135-136). How might this apply to the situation you have thought of?

<table>
<thead>
<tr>
<th>S1 Week 3</th>
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<tbody>
<tr>
<td>Debate 1</td>
<td>China needs a national accident scheme like New Zealand</td>
</tr>
<tr>
<td>Debate 2</td>
<td>It would be legitimate for the government to charge taxes on all land and economic rents without compensation.</td>
</tr>
<tr>
<td>Topic 1</td>
<td>Contrast alternative methods of allocating overhead costs when determining expense loadings.</td>
</tr>
<tr>
<td>Topic 2</td>
<td>Describe the products offered by Lloyds in Australia and why they are able to compete with Australian companies</td>
</tr>
</tbody>
</table>

For personal reflection

Adam Smith spoke out against the “insolent outrage of furious and disappointed monopolists.” Would I ever do so?

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S1 Week 4

Debate 1  Lifetime annuities should be made compulsory for Australian superannuation benefits
Debate 2  There is too much debt in society
Topic 1  Outline the role and responsibilities of actuaries in the development of a new life and general insurance contracts
Topic 2  Compare the cycles in general insurance pricing cycle with credit losses on housing loans in Australia and the USA

For personal reflection

Would I like to borrow using the salary linked mortgage described on page 120 of WEF?

S1 Week 5

Debate 1  There is no benefit promise in most superannuation funds and so they need no regulation other than to ensure they pay their taxes
Debate 2  Active investors do not beat the indices so superannuation assets should be invested passively
Topic 1  How much income do Australian pensioners receive from government and private sources respectively? Does this differ much in other countries
Topic 2  Comment on the growth of the hedge fund business internationally and why this might have occurred

For personal reflection

Where would I draw the line on undesirable investments in my own portfolio: tobacco, prostitution?

S1 Week 7

Debate 1  All public companies should be required to publish appraisal values.
Debate 2  Lump sum total and permanent disability benefits provide perverse incentives and should not be permitted in times when all but the severely mentally impaired can work.
Topic 1  Explain the differences between life insurance products offered in Australia and those offered in most Asian countries.
Topic 2  Explain how you would calculate the amount of life insurance different people required.

Personal reflection

Read *Wisdom* on (pages 158-161 of WEF).

- In your education, to what extent have you been motivated by a desire to grow in wisdom?
- Which subjects would you have chosen differently if you had thought about it more actively?
- Can you remember times when you gained insight only after you had become aware of cognitive dissonance?
- Of the work that you are currently doing, could you identify areas of cognitive dissonance?
S1 Week 8

Debate 1 | Community rating is just one more way in which older people make younger people pay for their benefits.
---|---
Debate 2 | Third party reimbursement is the most inefficient way of funding health insurance.
Topic 1 | Outline the major considerations you would take into account in pricing a new health insurance product
Topic 2 | Comment as to whether you consider the solvency standards applicable in Australia for health insurers and general insurers should be the same or not and why you have reached your conclusion

For personal reflection

What strategy will I use to determine my own insurance deductibles?

S1 Week 9

Debate 1 | The textbook says that the causes of each crisis are different. Hyman Minsky says that they are all caused by speculative debt. Minsky is obviously right.
---|---
Debate 2 | Longevity bonds are of no value because of basis risk.
Topic 1 | A risk manager for a major Australian bank has said "if you can't quantify a financial risk, then don't take it on". Comment
Topic 2 | What are the risks involved for a global insurer relative to a single economy insurer and identify how to manage the additional risks

For personal reflection

Would I take risks with my personal integrity?

S1 Week 10

Debate 1 | The APRA operational risk financial requirement is a waste of time.
---|---
Debate 2 | Mutual organizations should be encouraged in the superannuation industry.
Topic 1 | Why is it difficult to communicate uncertainty and risk?
Topic 2 | Outline as a regulator of the financial services sector in an economy like Australia the principles you would adopt in determining the minimum required capital that the various institutions should hold

For personal reflection

Read “Making money” (WEF 167/8). It is said: Money is power. It is also said that the love of money is the root of all evil. What do I believe? How much do I want?
S1 Week 11

Debate 1 | Civil litigation is likely to be much more effective than criminal prosecution when dealing with white collar crime.

Debate 2 | The economy is more a place of collaboration rather than competition. Regulation should therefore strive to promote collaboration rather than competition.

Topic 1 | Outline the strengths and weaknesses of the prescriptive and the principles based approach to prudential regulation

Topic 2 | Describe and comment on the "enforcement pyramid" of "responsive regulation"

For personal reflection

Do I see myself as a regulator, as one who is regulated, or as a participant in a process of meta-regulation? (See p 130 of WEF)
## 9 Actuaries’ Institute learning outcomes

The following table indicates the Actuaries’ Institute Learning Outcomes and in which lectures these are covered:

<table>
<thead>
<tr>
<th>Actuaries Institute Learning Objectives</th>
<th>Covered in Lecture</th>
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</thead>
<tbody>
<tr>
<td>Discuss and Apply an Actuarial Control Cycle in a Variety of Practical Commercial Situations</td>
<td>S1: L1; S2: L11</td>
</tr>
<tr>
<td>Apply the Tests of Professionalism</td>
<td>S1: L2; S2: L4, 6, 7 &amp; 11</td>
</tr>
<tr>
<td>Relate the Main Features within the General Environment to Medium and Long Term Commercial Decisions</td>
<td>S1: L2, 3, 5, 7 &amp; 8</td>
</tr>
<tr>
<td>Examine the Need for and Impact of Regulation and Government Policy on Medium and Long Term Commercial Decisions</td>
<td>S1, L11</td>
</tr>
<tr>
<td>Analyse the Main Features and Risks of Financial Products and Contracts, from the Point of View of Consumers and Providers</td>
<td>S1: L9 &amp; 10</td>
</tr>
<tr>
<td>Demonstrate an Understanding of Enterprise Risk Management and its Role in Organisational Management</td>
<td>S1: L9; S2: L3 – 10</td>
</tr>
<tr>
<td>Apply a Risk Assessment Framework to Identify and Assess the Risks in a Range of Commercial Situations</td>
<td>S1: L9 - L11; S2: L2 – 10</td>
</tr>
<tr>
<td>Discuss and Apply the Process of Product Design</td>
<td>S1: L4</td>
</tr>
<tr>
<td>Select an Appropriate Model to Solve Client Problems</td>
<td>S2: L9</td>
</tr>
<tr>
<td>Recognise the Importance of Capital</td>
<td>S1: L10; S2: L2 &amp; 3</td>
</tr>
<tr>
<td>Apply Relevant Approaches and Techniques to the Valuation of Liabilities</td>
<td>S2: L1</td>
</tr>
<tr>
<td>Apply Appropriate Techniques to the Pricing of Products and Contracts</td>
<td>S1: L4 &amp; 10</td>
</tr>
<tr>
<td>Measure, Report and Manage Solvency</td>
<td>S2: L3</td>
</tr>
<tr>
<td>Measure and Report Emerging Profits and/or Costs</td>
<td>S2: L6 &amp; 8</td>
</tr>
<tr>
<td>Monitor and Assess Experience</td>
<td>S2: L6</td>
</tr>
<tr>
<td>Manage the Business and Respond to the Experience</td>
<td>S1: L10; S2: L6, 8 &amp; 10</td>
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