ACTL 4003/5003
RESEARCH METHODS IN RISK AND ACTUARIAL STUDIES

Course Outline
Semester 2, 2015

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.
Table of Contents

PART A: COURSE-SPECIFIC INFORMATION

1  STAFF CONTACT DETAILS  2
2  COURSE DETAILS  2
  2.1 Teaching Times and Locations  2
  2.2 Units of Credit  2
  2.3 Summary of Course  2
  2.4 Course Aims and Relationship to Other Courses  2
  2.5 Student Learning Outcomes  3

3  LEARNING AND TEACHING ACTIVITIES  8
  3.1 Approach to Learning and Teaching in the Course  8
  3.2 Learning Activities and Teaching Strategies  8

4  ASSESSMENT  9
  4.1 Formal Requirements  9
  4.2 Assessment Details  9
  4.3.1 Literature map and presentation  10
  4.3.2 Research motivation statement and presentation  10
  4.3.3 Draft structure for research proposal and summary of research methodology  10
  4.3.4 Research paper presentation and critique  10
  4.3.5 Research proposal and presentation  10
  4.3.6 Take-home Final Exam  11
  4.3.7 Late Submission  11
  4.3 Assessment Format  11

5  COURSE RESOURCES  12

6  COURSE EVALUATION AND DEVELOPMENT  12

7  COURSE SCHEDULE  13
PART A: COURSE-SPECIFIC INFORMATION

1 STAFF CONTACT DETAILS

Lecturer-in-charge: Professor Hazel Bateman
Room: Business School Building 647
Phone No: 9385 3096
Email: h.bateman@unsw.edu.au
Consultation Times: By appointment

2 COURSE DETAILS

2.1 Teaching Times and Locations
The class will meet on Fridays from 10am-12 noon.

2.2 Units of Credit
The course is worth 6 units of credit. It is taught in parallel to both undergraduate (4th year Honours) students and postgraduate (MPhil and PhD) students. The assessment is the same for all groups.

2.3 Summary of Course
This course is a research methods course in risk and actuarial studies covering research skills and advanced topics in the areas of actuarial science, risk management and pensions and superannuation. Students will learn how to develop a research topic and proposal, apply the methodology of scientific research and gain exposure to publication and presentation of research in academic journals. The course will also involve the study, discussion and critical review of current research papers.

This course will consist of approximately 2 hours per week of presentation and discussion meetings in seminar format with research students (postgraduate and Honours) and academic staff from the School of Risk and Actuarial Studies. Course meetings will be seminar style and interactive. Research students will be involved in the presentation and discussion of research tasks and readings in their topic area. The course is conducted in both Session 1 and Session 2. PhD, Masters and Honours students will be formally assessed for only one Session (usually Session 1 for Honours students and Session 2 for PhD and MPhil students), however all enrolled research students are encouraged to attend throughout the year.

2.4 Course Aims and Relationship to Other Courses
The main aims of this course are to:

1. Provide the framework for research students in risk and actuarial studies to develop their research proposal. This will include:
   - Developing a research proposal
   - Completing a literature review (with an opportunity to develop skills in literature search and research paper review)
   - Planning and writing a thesis (introduction, research questions, research methods, results, conclusions)
   - Writing a research paper and getting it published
2. Provide a forum for discussion of the literature and advanced journal articles or texts in the research topic areas of the research students
3. Develop academic presentation and writing skills for research papers
4. Develop skills of critical analysis and discussion of research papers and advanced topics

This course is compulsory for all students enrolled in research programs offered by the School of Risk and Actuarial Studies. It provides a framework to assist students develop their thesis proposal.

2.5 Student Learning Outcomes

By the end of this course, you should be able to:
1. Conduct a literature review for a research topic, identifying relevant articles and summarising major contributions as well as constructing a literature map
2. Structure and present a review of a research paper in a format appropriate for an academic audience
3. Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes
4. Prepare and present research in a variety of formats for a variety of audiences

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.

Honours students

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all Undergraduate Honours 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’).

<table>
<thead>
<tr>
<th>Business Undergraduate Honours Program Learning Goals and Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Advanced knowledge of a field: Our graduates will have the ability to understand and apply an advanced body of knowledge within a particular field.</td>
</tr>
<tr>
<td>You should be able to:</td>
</tr>
<tr>
<td>a. Reflect critically on existing theoretical knowledge, ideas and practice in the relevant field to address the research topic: and</td>
</tr>
<tr>
<td>b. Plan and execute a piece of research with some independence.</td>
</tr>
<tr>
<td>2. Research capability: Our graduates will have the ability to undertake a piece of research in a relevant field.</td>
</tr>
<tr>
<td>You should be able to:</td>
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<tr>
<td>a. Present and defend your research in oral presentations; and</td>
</tr>
<tr>
<td>b. Present and defend their research in writing.</td>
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</tbody>
</table>
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 Business Honours and research 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 Advanced knowledge of a field     | Conduct a literature review for a research topic, identifying relevant articles and summarising major contributions as well as constructing a literature map. Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes. | • Literature map   
• Research motivation statement   
• Summary of research methodology   
• Research proposal |
| 2a Research capability: critical reflection | Critically review a research paper. | • Critical paper review   
• Exam |
| 2b Research capability: independently plan and execute research | Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes. | • Research proposal |
| 3a Communication: present and defend research orally | Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes. Prepare and present research in a variety of formats for a variety of audiences. Critically review a research paper. | • Literature map   
• Research motivation statement   
• Summary of research methodology   
• Critical paper review   
• Research proposal |
| 3b Communication: present and defend research in writing | Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes. Critically review a research paper. | • Literature map   
• Research motivation statement   
• Summary of research methodology   
• Critical paper review   
• Research proposal   
• Exam |
MPhil students
The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all MPhil 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’).

### Master of Philosophy (MPhil) Program Learning Goals and Outcomes

1. **Advanced knowledge of a field**: Our students will have the ability to understand and apply an advanced body of knowledge within a particular field.
   a. Students should be able to demonstrate a superior command of knowledge in the relevant field.
   b. Students should be able to demonstrate an understanding of research principles and methods appropriate to the relevant field of work.

2. **Research capability**: Our students will have the ability to undertake research that makes a contribution to knowledge in the relevant field.
   a. Students should be able to reflect critically on existing theoretical knowledge, ideas and practice within the relevant field.
   b. Students should be able to plan and execute a substantial piece of research with a high level of autonomy.

3. **Communication**: Our students will have the ability to communicate research effectively.
   a. Students should be able to coherently present the theoretical underpinnings, methodologies and results of research through oral presentations to specialist and non-specialist audiences.
   b. Students should be able to demonstrate an ability to present a coherent and sustained argument and disseminate their research in writing.

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

The following table show 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><strong>This course helps you to achieve the following learning goals for all Business MPhil and research students:</strong></td>
<td><strong>On successful completion of the course, you should be able to:</strong></td>
<td><strong>This learning outcome will be assessed in the following items:</strong></td>
</tr>
<tr>
<td>1. Specialist knowledge of a field</td>
<td>Conduct a literature review for a research topic, identifying relevant articles and summarising major contributions as well as constructing a literature map. Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes.</td>
<td>• Literature map  • Research motivation statement  • Summary of research methodology  • Research proposal</td>
</tr>
</tbody>
</table>
| 2a | Research capability: critical reflection | Critically review a research paper. | • Critical paper review  
• Exam |
| 2b | Research capability: independently plan and execute research | Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes. | • Research proposal |
| 3a | Communication: present and defend research orally | Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes.  
Prepare and present research in a variety of formats for a variety of audiences.  
Critically review a research paper. | • Literature map  
• Research motivation statement  
• Summary of research methodology  
• Critical paper review  
• Research proposal |
| 3b | Communication: present and defend research in writing | Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes.  
Critically review a research paper. | • Literature map  
• Research motivation statement  
• Summary of research methodology  
• Critical paper review  
• Research proposal  
• Exam |

**PhD students**

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all PhD 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’).
Business Doctor of Philosophy (PhD) Program Learning Goals and Outcomes

1. **Specialist knowledge:** Our students will have the ability to understand and apply a substantial body of knowledge at the frontier of the relevant field.
   a. Students should be able to demonstrate an expert/authoritative command of knowledge in the relevant field.
   b. Students should be able to demonstrate a thorough understanding of research principles and methods appropriate to the relevant field of work.

2. **Research capability:** Our students will have the ability to undertake research that makes an original contribution in the relevant field.
   a. Students should be able to critically evaluate existing theoretical knowledge, ideas and practice within the relevant field to generate original knowledge.
   b. Students should be able to undertake an independent investigation to generate original knowledge.

3. **Communication:** Our students will have the ability to communicate research effectively in the scholarly community.
   a. Students should be able to cogently present the theoretical underpinnings, methodologies and results of research through oral presentations to peers and the scholarly community.
   b. Students should be able to demonstrate an ability to effectively communicate their research in writing suitable for publication.

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

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 Business PhD and research 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>
<tr>
<td>1 Specialist knowledge of a field</td>
<td>Conduct a literature review for a research topic, identifying relevant articles and summarising major contributions as well as constructing a literature map. Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes.</td>
<td>• Literature map  • Research motivation statement  • Summary of research methodology  • Research proposal</td>
</tr>
<tr>
<td>2a Research capability: critical reflection</td>
<td>Critically review a research paper.</td>
<td>• Critical paper review  • Exam</td>
</tr>
<tr>
<td>2b Research capability: independently plan and execute research</td>
<td>Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes.</td>
<td>• Research proposal</td>
</tr>
</tbody>
</table>
### 3a Communication: present and defend research orally

- Present and defend research orally.

- Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes.

- Prepare and present research in a variety of formats for a variety of audiences.

- Critically review a research paper.

### 3b Communication: present and defend research in writing suitable for publication

- Present and defend research in writing suitable for publication.

- Prepare and present a research proposal covering research aim and motivation, literature review, approach and methodology and expected outcomes.

- Critically review a research paper.

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### 3 LEARNING AND TEACHING ACTIVITIES

Learning in this course is based on experiential guided self-learning appropriate for research students. The course coordinator will give presentations on research skills involving interactive discussion. Students will apply the concepts to their own research and make presentations to the class on a regular basis with relevant feedback. The nature of the course is for students to learn by doing and assessment tasks are designed to support this.

#### 3.1 Approach to Learning and Teaching in the Course

The teaching strategy involves:

- Presentation by the course coordinator on key aspects of research skills, accompanied by discussion in the class.

- Reading of relevant reference material by students for each topic and identifying questions and comments for discussion in the class.

- Presentations by the students with feedback from the class and academics and later year research students, requiring students to apply the research skills covered to their research topic.

#### 3.2 Learning Activities and Teaching Strategies

The learning experience will mainly involve experiential self-learning through:

- Discussions in class.

- Student presentations with feedback from later year research students and academic staff.

- One-on-one discussions with the course coordinator where students require additional support.

- Feedback through assessment tasks throughout the course.

*Students are not permitted to bring into the lectures any sound or video recording devices.*
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.

Honours and MPhil students will complete the course for assessment in their first session of enrolment. PhD students will complete the course for assessment in the second session of enrolment (although will be given the opportunity to prepare and present their literature map and research motivation in session one). All assessment tasks will be completed in the session of formal assessment.

4.2 Assessment Details
The following table provides the relative weighting of the assessment components for students:

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Weighting</th>
<th>Length</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature map and presentation</td>
<td>5%</td>
<td>1 page 15 minute presentation</td>
<td>MPhil – assessment complete</td>
</tr>
<tr>
<td>Research motivation statement and presentation</td>
<td>5%</td>
<td>1 page 15 minute presentation</td>
<td>MPhil – assessment complete</td>
</tr>
<tr>
<td>Draft structure for research proposal and summary of research methodology</td>
<td>5%</td>
<td>3 pages 15 minute presentation</td>
<td>MPhil – Week 3 (14th August)</td>
</tr>
<tr>
<td>Research paper presentation and critique</td>
<td>15%</td>
<td>40 minute presentation 10 minute discussion</td>
<td>MPhil – Week 5 (28th August)</td>
</tr>
<tr>
<td>Research proposal and presentation</td>
<td>30%</td>
<td>40 minute presentation 10 minute discussion</td>
<td>MPhil – Week 11 (16th October)</td>
</tr>
<tr>
<td>Take Home Final Examination</td>
<td>40%</td>
<td>Take home exam</td>
<td>MPhil – assessment complete</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Whilst feedback will be provided to students after their assessments and presentations have been completed, students should note that the final assessment can involve standardisation of marks to maintain consistency across years.

4.3.1 Literature map and presentation
Students are required to carry out a literature review for their research topic and prepare a 1 page literature map. Students will make a concise presentation of their literature map explaining how their research links to the literature. Marks will be awarded for both the submitted literature map and the quality of the presentation. The literature map will be graded based on the relevance, comprehensiveness, structure and format.

4.3.2 Research motivation statement and presentation
Students are required to prepare and present a research motivation statement for their proposed research topic. Students will make a concise presentation of their research motivation statement explaining what they expect to be contributing to literature in their research. Marks will be awarded for both the submitted statement and the presentation.

4.3.3 Draft structure for research proposal and summary of research methodology
Students will prepare a 1 page draft structure for their research proposal and a 2 page summary of their research methodology for their research topic. Students will make a concise presentation of their proposed research methodology explaining how they expect to conduct their research. Marks will be awarded for both the submitted document and the presentation.

4.3.4 Research paper presentation and critique
Students will present a research paper related to their area of research, which will either be a recently published article, a working paper or a seminal article in the area. The presentation will be 50 minutes with 10 minutes for discussion. The aim of the presentation is to review the key concepts of the article in simple terms, present the research approach and results and to then critique the article. The paper must be circulated by the student at least one week in advance to all academic staff and research students attending the course.

4.3.5 Research proposal and presentation
Proposal presentations will be made in Week 12 of the course.

The weights for assessment of the components of the thesis proposal will be:
- Research Aims (20%)
- Literature Review (30%)
- Approach and Methodology (30%)
- Presentation (20%)

For the proposal presentations the assessment will be based on:
- Presentation skills (40%)
- Content of presentation (40%)
• Demonstrated understanding and viability of research topic (20%)

4.3.6 Take-home Final Exam
Students will be required to complete a take-home final examination. This will involve the critical review of an article in a topic area in risk and actuarial studies research or a research topic presented in the course. The purpose of reviewing these articles is to stimulate thought about research design, the decisions that researchers make in designing and conducting research, and the implications of these decisions.

The critique will be expected to include the following:

1. A brief summary of the question the author is trying to address.
   • Is the question interesting, important? Why or why not?
   • Where does this question fit within the literature?
   • This will usually be required in a form that explains the key ideas to an audience unfamiliar with the detail of the research area and assesses how clearly you can explain the paper in simple terms.

2. A brief description of the model the author uses to answer the question.
   • What are the key concepts, and what is the relationship between these concepts?

3. A discussion of the appropriateness of the author’s methodology.
   • Is it appropriate given the author’s research question?
   • Discuss the positive and negative implications of the choice of sample, measures, and methods.

4. An evaluation of the author’s conclusions.
   • Do the conclusions address the research question?
   • Are the conclusions consistent with the results or findings?
   • Are there untested and unexplored alternative explanations for the results? If yes, does the author recognize and discuss them?

5. Suggestions for improvement (this can be done in conjunction with each of the items above, or as a separate section of the critique).
   • For each major criticism of the work suggest ways in which the work could be improved.

Comparison with other articles in the literature, particularly those covered in the course, will also be expected.

4.3.7 Late Submission
Late submission of any assessment item will not be accepted unless the requirements relating to “Special Consideration” apply (see Part B Course Outline).

4.3 Assessment Format
Students are expected to use LaTeX for the written assessment tasks and presentations.
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
There are many textbooks and guides for research proposals. The UNSW Learning Centre has material that can assist with research proposals including the UNSW Thesis proposal guide. A useful reference in the social sciences is: Creswell, J. W., (2009), Research Design: Qualitative, Quantitative and Mixed Methods Approaches, 3rd edition, Sage.

Other papers that are considered relevant will be available on Course website.

The Course website site for this course will contain the Course Outline, presentations made by the lecturer, 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 Course Coordinator. The website for this course is on Moodle at: http://moodle.telt.unsw.edu.au

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.
7 COURSE SCHEDULE
Topics by week are set out below. A schedule of research presentations will be circulated once the course has commenced.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date*</th>
<th>Topics</th>
</tr>
</thead>
</table>
| 1    | 31st July   | • Course introduction – New research students  
            • Honours students – 3 minute thesis                                    |
| 2    | 7th August  | No class                                                              |
| 3    | 14th August | **Student Presentations and Discussion**  
            • Honours students – Research update (20 minute presentation)  
            • MPhil – Proposed methodology                                      |
| 4    | 21st August | **Workshop with LIC**                                                |
| 5    | 28th August | **Student Presentations and Discussion**  
            • MPhil – Research paper presentation                                  |
| 6    | 4th September | **Workshop with LIC**                                               |
| 7    | 11th September | **Student Presentations and Discussion**  
            • Honours students – Research update (20 minute presentation)        |
| 8    | 18th September | **Workshop with LIC**                                              |
| 9    | 25th September | No class                                                            |
|      |             | **Mid-session break**                                              |
| 10   | 9th October  | **Student presentations and Discussion**  
            • Honours students – Research update (20 minute presentation)        |
| 11   | 16th October | **Student Presentations and Discussion**  
            • MPhil – Research proposal  
            (Honours students – draft thesis due to supervisor on Monday 19th October) |
| 12   | 23rd October | **No class**  
            (Honours students thesis DUE on Monday 2nd November at 5pm)        |