

MC-ACTSCI Master of Actuarial Science

Year and Campus:	2010 - Parkville
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Graduate/Postgraduate
Duration & Credit Points:	200 credit points taken over 24 months full time. This course is available as full or part time.
Coordinator:	Professor David Dickson
Contact:	Graduate School of Business and Economics Student Centre Level 4, 198 Berkeley Street Telephone: +61 3 8344 1670 Online Enquiries: http://www.gsbe.unimelb.edu.au/future/unity_forms/contact.html (http://www.gsbe.unimelb.edu.au/future/unity_forms/contact.html/) Web: www.melbournegsm.unimelb.edu.au (http://www.gsbe.unimelb.edu.au/)
Course Overview:	The overall aim of the Masters of Actuarial Science is to provide graduates who have a bachelor's degree that includes a strong mathematical component with a two-year program that provides a pathway to a professional actuarial career. Graduates of the proposed degree will be well placed to undertake further graduate work in actuarial studies, or to enter the actuarial profession.
Objectives:	<p>1. Learning Goal</p> <p>Graduates of this degree will be critical thinkers in relation to actuarial studies and related disciplines.</p> <p>Learning objectives to achieve this goal</p> <p>On successful completion of this degree students will be able to:</p> <ul style="list-style-type: none"> # Describe and explain the fundamental theories of actuarial science as they apply in life insurance, general insurance and superannuation; # Assess the suitability of actuarial, financial and economic models in solving actuarial problems; and # Interpret and critically evaluate articles in the actuarial research literature. <p>2. Learning Goal</p> <p>Graduates of this degree will be analytical in the application of actuarial theory, knowledge, principles, techniques and data.</p> <p>Learning objectives to achieve this goal</p> <p>On successful completion of this degree students will be able to:</p> <ul style="list-style-type: none"> # Analyse actuarial data using advanced statistical techniques; # Calculate quantities such as premiums, reserves and superannuation contribution rates using actuarial techniques; and # Analyse real and hypothetical problems in insurance and superannuation. <p>3. Learning Goal</p> <p>Graduates of this degree will be problem solvers capable of explaining, applying and critically evaluating the use of actuarial models, particularly in relation to insurance and superannuation.</p> <p>Learning objectives to achieve this goal</p> <p>On successful completion of this degree students will be able to:</p> <ul style="list-style-type: none"> # Describe the core areas of actuarial practice and relate to those areas actuarial principles, theories and models; # Analyse and evaluate options in business decision making; and # Critically analyse business decision making problems and apply relevant models and theories to generate effective solutions.
Course Structure & Available Subjects:	The degree is designed to be completed in two-years of full time study and requires completion of 200 points. The degree consists of 16 semester-length subjects comprising 8 compulsory

	core subjects and 8 elective subjects. It is recommended that students take four core and four elective subjects in both the first and second years of the program.																											
Subject Options:	<p>Core subjects Students must take a total of eight core subjects:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>300-673 Mathematics of Finance I</td> <td>Not offered 2010</td> <td>12.50</td> </tr> <tr> <td>300-674 Mathematics of Finance II</td> <td>Not offered 2010</td> <td>12.50</td> </tr> <tr> <td>300-675 Mathematics of Finance III</td> <td>Not offered 2010</td> <td>12.50</td> </tr> <tr> <td>300-676 Insurance Risk Models</td> <td>Not offered 2010</td> <td>12.50</td> </tr> <tr> <td>300-677 Life Contingencies</td> <td>Not offered 2010</td> <td>12.50</td> </tr> <tr> <td>300-678 Life Insurance Models I</td> <td>Not offered 2010</td> <td>12.50</td> </tr> <tr> <td>300-679 Life Insurance Models 2</td> <td>Not offered 2010</td> <td>12.50</td> </tr> <tr> <td>300-680 Statistical Techniques in Insurance</td> <td>Not offered 2010</td> <td>12.50</td> </tr> </tbody> </table> <p>Elective subjects Eight electives to be taken from the Master of Management elective or foundation subject listings. Depending on the background of students entering the Masters degree, some students may also take subjects in probability and statistics.</p>	Subject	Study Period Commencement:	Credit Points:	300-673 Mathematics of Finance I	Not offered 2010	12.50	300-674 Mathematics of Finance II	Not offered 2010	12.50	300-675 Mathematics of Finance III	Not offered 2010	12.50	300-676 Insurance Risk Models	Not offered 2010	12.50	300-677 Life Contingencies	Not offered 2010	12.50	300-678 Life Insurance Models I	Not offered 2010	12.50	300-679 Life Insurance Models 2	Not offered 2010	12.50	300-680 Statistical Techniques in Insurance	Not offered 2010	12.50
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Entry Requirements:	<p>1. The Selection Committee will evaluate the applicant's ability to pursue successfully the course using the following criteria:</p> <ul style="list-style-type: none"> # An undergraduate or postgraduate degree with the equivalent of a major in mathematically based subjects; # Performance on the Graduate Records Examination (GRE) unless the applicant has met one of the approved conditions for GRE exemption; and # The applicant's submitted statement of intent in seeking entry. <p>2. The Selection Committee may conduct interviews and tests and may call for referee reports or employer references to elucidate any of the matters referred to above.</p>																											
Core Participation Requirements:	For the purpose of considering requests for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this course are articulated in the Course Description, Course Objectives and Generic Skills of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/																											
Graduate Attributes:	On successful completion of this degree graduates will be: Receptive to alternate ideas through a review of the literature and through class participation and assessment; Ethical in their approach to research and work practices; Advanced in their use, critical evaluation and testing of actuarial models; Adept in statistical reasoning through completion of core quantitative subjects in the degree; Advanced in problem solving through their understanding of financial, statistical and actuarial techniques; Skilled in working effectively with computer software for the analysis of data; Adept at retrieval, summary and interpretation of actuarial and financial information through class exercises and assessment; Able to apply and synthesise mathematical, statistical, financial and actuarial theory, models and evidence to a variety of financial and insurance issues; Independent and effective in communication of ideas; and Able to collaborate and be effective in team work.																											
Generic Skills:	<p>On successful completion of this degree students should have enhanced their skills in:</p> <ul style="list-style-type: none"> # Recognising the interrelationships and synergies which exist between the disciplines of the faculty; # Synthesizing ideas, theories and data in developing solutions to actuarial problems; # Critical evaluation of evidence in support of an argument or proposition; 																											

- # Problem solving in actuarial practice through the application of appropriate theories, principles and data;
- # Teamwork through collaborative exercises in seminars, workshops and assessment;
- # The use of software packages applicable to actuarial and statistical modelling;
- # Written and oral communication of actuarial ideas, theories and solutions to peers and the wider community; and
- # Research including the retrieval of information from a variety of sources.

Notes:**Assessment**

Students must pass all subjects to qualify for the Master of Actuarial Science; 100 points in the first year and 100 points in the second year.

Duration

This program is available for semester 1 entry only.

A full-time student should complete the course in four consecutive semesters (two years) taking four subjects in each semester. A part-time student should complete the course in eight consecutive semesters (four years) taking two subjects in each semester. Part-time candidates should note that most subjects are offered during normal business hours.

Postgraduate Diploma in Actuarial Science

Students enrolled in the Master of Actuarial Science who are either unable, or who choose not to continue with their studies, may be eligible to exit with a Postgraduate Diploma in Actuarial Science. Students must have successfully completed four core subjects and four elective subjects and be in good standing to be eligible to be awarded the Postgraduate Diploma in Actuarial Science.