ACTL10001 Introduction to Actuarial Studies

Credit Points:	12.5
Level:	1 (Undergraduate)
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: Two 1-hour lectures and a 1-hour tutorial per week Total Time Commitment: Estimated total time commitment of 170 hours.
Prerequisites:	One of the following subjects: # MAST10013 UMEP Mathematics for High Achieving Students # 620-121 Mathematics A (Advanced) # 620-141 Mathematics A # **MAST10007 Linear Algebra (../../view/current/mast10007)** # **MAST10006 Calculus 2 (../../view/current/mast10006)** # **MAST10008 Accelerated Mathematics 1 (view/current/mast10008)**
Corequisites:	Students who do not meet the prerequisite may enrol with **MAST10006 Calculus 2 (../../view/current/mast10006)** taken as a corequisite.
Recommended Background Knowledge:	None
Non Allowed Subjects:	Students who have completed a level-2 actuarial studies subject will not normally be permitted to enrol in this subject.
Core Participation Requirements:	For the purposes of considering requests for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements for 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/
Coordinator:	Dr Xueyuan Wu
Contact:	**xueyuanw@unimelb.edu.au (mailto:xueyuanw@unimelb.edu.au)**
Subject Overview:	This subject is an introduction to compound interest functions and operations; valuation of annuities, bonds and loans; demography, and factors affecting population growth and size; construction and use of the life table; applications of these in life insurance; types of insurance products; the role of the actuary; and the significance of financial institutions utilising actuarial management.
Learning Outcomes:	# Apply relevant pre-requisite mathematical knowledge in the solution of a range of practical problems # Calculate the accumulation or present value of money under compound interest # Calculate the amount or present value of payments under fixed interest contracts such as loans,annuities and bonds; # Solve equations of value for the effective rate of interest; # Describe the factors that affect the growth and structure of populations and explain their impact on these populations; # Apply simple mathematical techniques to analyse and project populations # Apply survival models and life tables to calculate probabilities of death or survival

	# Calculate the expected present value of contingent payments under securities subject to default and under simple insurance contracts # Describe the features of insurance products sold in Australia; # Describe the role of an actuary in a range of commercial situations.
Assessment:	A 2-hour end-of-semester examination (70%), two assignments totalling not more than 2000 words (20%), and a 45 minute mid-semester examination (10%). Satisfactory completion of this subject requires a 50% pass in the end of semester examination.
Prescribed Texts:	You will be advised of prescribed texts by your lecturer.
Recommended Texts:	Information Not Available
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2015/B-ARTS)** # **Bachelor of Biomedicine (https://handbook.unimelb.edu.au/view/2015/B-BMED)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2015/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2015/B-MUS)** # **Bachelor of Science (https://handbook.unimelb.edu.au/view/2015/B-SCI)** # **Bachelor of Engineering (https://handbook.unimelb.edu.au/view/2015/B-ENG)** You should visit **learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)** and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	# High level of development: problem solving; synthesis of data and other information.