ACTL30004 Actuarial Statistics

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: Three hours of lectures and/ or tutorials per week Total Time Commitment: Not available
Prerequisites:	**300-313 Actuarial Modelling II (/view/2010/300-313)** .
Corequisites:	None
Recommended Background Knowledge:	Please refer to Prerequisites and Corequisites.
Non Allowed Subjects:	Students may not gain credit for both **300-315 Actuarial Statistics (/view/2010/300-315)** and either **300-331 Modelling in Insurance and Finance I (/view/2010/300-331)** or **620-372 Applied Statistical Inference (/view/2010/620-372)** .
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:	Miss Ping Chen
Contact:	**dgpitt@unimelb.edu.au (mailto:dgpitt@unimelb.edu.au)**
Subject Overview:	Topics include experience rating; claim run-off triangles; generalised linear models; time series and their applications; simulation; decision theory.
Objectives:	# Describe the fundamental concepts of rating and apply them to simple experience rating systems # Describe and apply techniques for analysing a delay (or run-off) triangle and projecting the ultimate position # Use statistical software such as R to estimate parameters for statistical models and to write simple functions to complete routine tasks # Explain and apply the method of maximum likelihood estimation # Explain the fundamental concepts of a generalised linear model (GLM), and describe how a GLM may apply # Define and apply the main concepts underlying the analysis of time series models # Explain the concepts of ""Monte Carlo"" simulation using a series of pseudo-random numbers # Apply pre-requisite mathematical and statistical concepts to the solution of problems on the above topics
Assessment:	A 2-hour end-of-semester examination (80%) and up to three assignments totalling not more than 20 pages (20%).
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/2010/B-ARTS)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2010/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2010/B-MUS)** 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: written communication; problem solving; statistical reasoning; application of theory to practice; interpretation and analysis; synthesis of data and other information; evaluation of data and other information; use of computer software.
Notes:	Students may not gain credit for both **300-315 Actuarial Statistics (/view/2010/300-315)** and either **300-331 Modelling in Insurance and Finance I (/view/2010/300-331)** or **620-372 Applied Statistical Inference (/view/2010/620-372)** .