ACTL20002 Financial Mathematics II

Credit Points:	12.5
Level:	2 (Undergraduate)
Dates & Locations:	2016, 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:	Both of:

Subject	Study Period Commencement:	Credit Points:
ACTL20001 Financial Mathematics I	Semester 1	12.50
MAST20004 Probability	Semester 1	12.50

Corequisites:	None
Recommended Background Knowledge:	Please refer to Prerequisites and Corequisites.
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Coordinator:	Prof Mark Joshi
Contact:	**mjoshi@unimelb.edu.au (mailto:mjoshi@unimelb.edu.au)**
Subject Overview:	Topics include discount valuation of bonds and other assets including forward contracts; term structure of interest rates; duration and convexity; distributions of accumulations and present values; stochastic simulation; time series models
Learning Outcomes:	# Perform compound interest calculations relating to financial assets, including the calculation of price and yield with and without allowance for default # Calculate rates of return on investment portfolios using methods employed by actuaries # Calculate duration and convexity of cash flow and demonstrate an understanding of the principles and limitations of immunisation # Show an understanding of spot rates, forward rates and the term structure of interest rates # Analyse compound interest problems at a more advanced level than in ACTL20001 Financial Mathematics I # Show an understanding of simple stochastic models for investment returns # Show an understanding of the application of simple time series models for investment returns

	# Apply pre-requisite mathematical and statistical concepts to the solution of problems on the above topics
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:	Compound Interest and its Applications, Fitzherbert and Pitt, 2013
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/2016/B-ARTS)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2016/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2016/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; use of computer software.