FNCE30007 Derivative Securities

Credit Points:	12.5
Level:	3 (Undergraduate)
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. 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:	**FNCE20001 Business Finance (../../view/2010/333-201)** and one of **ECOM20001 Introductory Econometrics (../../view/2010/316-205)** , **ECON20003 Quantitative Methods 2 (../../view/current/ECON20003)** , **MAST20005 Statistics (../../view/current/MAST20005)** , 620-270 Applied Statistics, **MAST20004 Probability (../../view/current/MAST20004)** , **MAST20006 Probability for Statistics (../../view/current/MAST20006)** , 620-261 Introduction to Operations Research (2008 or earlier), **MAST20018 Discrete Maths and Operations Research (../../view/current/MAST20018)** or **MAST20029 Engineering Mathematics (../../view/current/MAST20029)** .
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:	Dr Ali Akyol, Dr Jonathan Dark
Contact:	Semester 1: **aakyol@unimelb.edu.au (mailto:aakyol@unimelb.edu.au)** Semester 2: **jdark@unimelb.edu.au (mailto:jdark@unimelb.edu.au)**
Subject Overview:	This subject focuses on the application and valuation of derivative securities, such as forwards, futures, swaps and options. The emphasis will be on arbitrage relations, valuation, and hedging with derivatives. The topics covered include; Forwards and futures: the mechanics of trading, price determination, hedging strategies; Swaps: definition and valuation; Options: payoffs, arbitrage bounds, trading strategies, the binomial model, the Black-Scholes model and its relationship to the binomial, hedging, American options and dividends, options on futures, limitations of the binomial and Black-Scholes Models.
Learning Outcomes:	On successful completion of this subject students should be able to: # Explain the role of derivatives exchanges and the characteristics of derivative securities; # Explain the role of arbitrage as a basis for determining the prices of derivative securities; # Explain the mechanics of trading futures contracts, forward contracts and options; # Design and manipulate payoff diagrams for various derivative securities; # Calculate option prices using the Black-Scholes and binomial models;

	# Explain how derivative securities can be used in hedging; # Reflect on the theoretical limitations of key derivatives pricing models and on practical difficulties that arise in their implementation.
Assessment:	3-hour end-of-semester examination (75%) A mid-semester examination between weeks 6 – 8 (25%)
Prescribed Texts:	You will be advised of prescribed texts by your lecturer.
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; statistical reasoning; application of theory to practice; synthesis of data and other information; evaluation of data and other information. # Moderate level of development: written communication; interpretation and analysis; critical thinking; use of computer software. # Some level of development: oral communication; collaborative learning; team work; accessing data and other information from a range of sources.
Related Breadth Track(s):	Economics & Finance