316-806 Quantitative Analysis of Finance I

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: Three hours per week of lectures and tutorials (Semester 1). Total Time Commitment: Not available
Prerequisites:	316-206 Quantitative Methods 2 or equivalent.
Corequisites:	None
Recommended Background Knowledge:	None
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:	Assoc Prof Olan T Henry
Subject Overview:	This course is concerned with the application of quantitative tools to model, estimate and forecast financial variables. Topics considered include: the analysis of the properties of financial data (such as non-normality and non-stationarity); the application of estimation methods (such as unit roots and cointegration) to test the rational valuation model of share prices; the application of the GARCH class of models to estimate volatility and to test the capital asset pricing model. The course will also include an introduction to more complex financial econometrics (such as artificial neural-networks, generalised method of moments and state-space modelling).
Objectives:	On successful completion of this subject students should be able to: # Apply quantitative tools to model, estimate and forecast financial variables; # Analyse the statistical properties of financial prices and returns; # Evaluate models of risk based on the Capital Asset Pricing Model and variants assuming non-normal return processes; # Analyse recent advances in unit root and cointegration methods in modeling the term structure of interest rates and asset price bubbles; # Describe the strengths and limitations of alternative quantitative methods by reproducing existing results using computer skills and mathematical modeling techniques, in conjunction with a range of financial data sets; # Perform sensitivity analyses on proposed models, which should include the application of alternative distributional specifications to model risk.
Assessment:	A mid-semester assignment (30%) and a take-home final examination (70%).
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees

Generic Skills:	On successful completion of this subject, students should have improved the following generic skills: # Evaluation of ideas, views and evidence # Synthesis of ideas, views and evidence # Strategic thinking # Critical thinking # Application of theory to economic policy and business decision making # Accessing economic and other information # Summary and interpretation of information # Application of windows software # Using computer programs # Statistical reasoning # Problem solving skills # Collaborative learning and teamwork # Negotiation and bargaining # Written communication # Oral communication
Notes:	This subject is only available to students in the Postgraduate Diploma in Finance or the first year of the Master of Financial Management.
Related Course(s):	Master of Finance Master of Financial Management Postgraduate Diploma in Finance