FNCE90010 Numerical Techniques in Finance

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 3 hours of classes per week plus 3 hours of seminars duringthe semester Total Time Commitment: Estimated total time commitment of 120 hours per semester
Prerequisites:	Entry into the Master of Commerce (Finance)
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	**333-403 Numerical Techniques in Finance (/view/2010/333-403)**
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 Jonathan Dark
Contact:	Graduate School of Business and Economics Student Centre Level 4, 198 Berkeley Street Telephone: +61 3 8344 1670 Online Enquiries: **http://www.gsbe.unimelb.edu.au/future/unity_forms/contact.html (http://www.gsbe.unimelb.edu.au/future/unity_forms/contact.html/)** Web: **www.melbournegsm.unimelb.edu.au (http://www.gsbe.unimelb.edu.au/)**
Subject Overview:	Numerical Techniques focuses on the theory and application of numerical methods for solving financial problems. The applications may include option valuation, value at risk, term structure modelling, portfolio simulation and optimization and capital budgeting. These applications motivate the study of matrix methods, the solutions of linear and nonlinear equations, interpolation and approximation methods, numerical integration and Monte Carlo methods. No prior programming experience is required as the principles of programming are covered.
Objectives:	On successful completion of this subject students should be able to: # Explain the principles of object-orientated programming; # Design computer programs that implement solutions in an efficient and effective manner; # Analyse the effects of numerical errors on computer-based finance models; # Use a variety of numerical procedures to solve quantitative finance problems; # Identify and analyse the assumptions, limitations and implementations of computer-based financial models; # Evaluate the applicability of various mathematical techniques to classes of finance problems.
Assessment:	3-hour end-of-semester examination (50%) Assignments totalling not more than 5000 words (50%)
Prescribed Texts:	You will be advised of prescribed texts by your lecturer.
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: # Written communication # Collaborative learning # Problem solving # Team work # Statistical reasoning # Application of theory to practice # Interpretation and analysis # Critical thinking # Synthesis of data and other information # Evaluation of data and other information # Using computer software # Accessing data and other information from a range of sources
Notes:	Students may not gain credit for both 333-627 Numerical Techniques in Finance and 333-403 Numerical Techniques in Finance.
Related Course(s):	Master of Commerce - Finance