

## 333-627 Numerical Techniques in Finance

<b>Credit Points:</b>	12.500
<b>Level:</b>	Graduate/Postgraduate
<b>Dates &amp; Locations:</b>	2008, This subject commences in the following study period/s: Semester 2, - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 3 hours of classes per week plus 3 hours of seminars during the semester (Semester 1). Total Time Commitment: Not available
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;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.&lt;/p&gt;         &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>
<b>Subject Overview:</b>	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.
<b>Assessment:</b>	A 3-hour end-of-semester examination (50%) and assignments totalling not more than 5000 words (50%).
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>On successful completion of this subject students should be able to:</p> <ul style="list-style-type: none"> <li># Explain the principles of object-orientated programming.</li> <li># Design computer programs that implement solutions in an efficient and effective manner.</li> <li># Analyse the effects of numerical errors on computer-based finance models</li> <li># Use a variety of numerical procedures to solve quantitative finance problems.</li> <li># Identify and analyse the assumptions, limitations and implementations of computer-based financial models.</li> <li># Evaluate the applicability of various mathematical techniques to classes of finance problems</li> </ul> <p>On successful completion of this subject, students should have improved the following generic skills:</p> <ul style="list-style-type: none"> <li># Written communication</li> <li># Collaborative learning</li> <li># Problem solving</li> </ul>

	<ul style="list-style-type: none"><li># Team work</li><li># Statistical reasoning</li><li># Application of theory to practice</li><li># Interpretation and analysis</li><li># Critical thinking</li><li># Synthesis of data and other information</li><li># Evaluation of data and other information</li><li># Using computer software</li><li># Accessing data and other information from a range of sources</li></ul>
<b>Related Course(s):</b>	Master of Commerce - Finance