

## 300-408 Advanced Financial Mathematics I

<b>Credit Points:</b>	12.50
<b>Level:</b>	4 (Undergraduate)
<b>Dates &amp; Locations:</b>	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: Three hours of lectures and/or tutorials per week Total Time Commitment: Not available
<b>Prerequisites:</b>	<b><u>300-334 Financial Mathematics III (/view/2009/300-334)</u></b> and <b><u>300-316 Models for Insurance and Finance (/view/2009/300-316)</u></b> .
<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>Coordinator:</b>	Daniel Dufresne
<b>Subject Overview:</b>	The binomial model; risk-neutral pricing of derivative securities; Brownian motion; introduction to It $\tilde{A}$ 's formula and SDEs; stochastic asset models; Black-Scholes model; arbitrage and hedging; interest-rate models; actuarial applications (eg. maturity guarantees, SPDAs).
<b>Objectives:</b>	.
<b>Assessment:</b>	A 50-minute mid-semester test (20%) and a 2-hour end-of-semester examination (80%).
<b>Prescribed Texts:</b>	None
<b>Recommended Texts:</b>	Information Not Available
<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>	# High level of development: written communication; problem solving; statistical reasoning; application of theory to practice; interpretation and analysis.