

## ACTL90002 Mathematics of Finance II

<b>Credit Points:</b>	12.5						
<b>Level:</b>	9 (Graduate/Postgraduate)						
<b>Dates &amp; Locations:</b>	2016, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.						
<b>Time Commitment:</b>	Contact Hours: A 2 hour seminar and a 1 hour workshop per week Total Time Commitment: Estimated total time commitment of 120 hours per semester						
<b>Prerequisites:</b>	ACTL90001 Mathematics of Finance I <table border="1" data-bbox="387 573 1485 719"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ACTL90001 Mathematics of Finance I</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ACTL90001 Mathematics of Finance I	Semester 1	12.50
Subject	Study Period Commencement:	Credit Points:					
ACTL90001 Mathematics of Finance I	Semester 1	12.50					
<b>Corequisites:</b>	None						
<b>Recommended Background Knowledge:</b>	Students should be competent in the use of Excel.						
<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>	Mrs Jane Joshi						
<b>Contact:</b>	Email: <a href="mailto:jane.joshi@unimelb.edu.au">jane.joshi@unimelb.edu.au</a> (mailto:jane.joshi@unimelb.edu.au)						
<b>Subject Overview:</b>	Topics include: measures of investment risk, portfolio theory, models of asset returns, asset liability modelling, equilibrium models, the efficient markets hypothesis, stochastic models of security prices, and Brownian Motion and its application.						
<b>Learning Outcomes:</b>	<p>On successful completion of this subject a student should be able to:</p> <ul style="list-style-type: none"> <li># Discuss the advantages and disadvantages of different measures of investment risk;</li> <li># Describe and discuss the assumptions of mean-variance portfolio theory and its principal results;</li> <li># Describe and discuss the properties of single and multifactor models of asset returns;</li> <li># Describe asset pricing models, discussing the principal results and assumptions and limitations of such models;</li> <li># Discuss the various forms of the Efficient Markets Hypothesis and discuss the evidence for and against the hypothesis;</li> <li># Demonstrate a knowledge and understanding of stochastic models of the behaviour of security prices;</li> <li># Define and apply the main concepts of Brownian motion (or Wiener Processes).</li> </ul>						
<b>Assessment:</b>	A 1000 word assignment due week 11 (10%); A one hour mid-semester test due week 10 (20%) and A two hour end of semester exam (70%).						

<b>Prescribed Texts:</b>	Introduction to Mathematical Portfolio Theory, Joshi, Paterson 2013.
<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: <ul style="list-style-type: none"><li># Written communication;</li><li># Problem solving;</li><li># Statistical reasoning;</li><li># Application of theory to practice;</li><li># Interpretation and analysis.</li></ul>
<b>Related Course(s):</b>	Graduate Diploma in Actuarial Science Master of Actuarial Science