### **Newcastle Business School**

### **ACFI3130: Derivative Securities** 2024

MISSION: To develop a unique business school identity which is distinctive in the marketplace and provides a clear value proposition for students. This will be achieved by embedding the themes of entrepreneurship and innovation, digitalisation and data within our programs and embracing sustainability, work integrated learning and a commitment to social justice.

# **OVERVIEW**

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Course Description	This course provides an insight into measuring and managing risk exposures of firms operating in the financial services industry.	
	Introducing analytical tools of measuring interest rate risk, credit risk, and liquidity risk.	
Contact Hours	Integrated Learning Session	
	Face to Face On Campus	
	Two (2) hour(s) per Week for Full Term	
	Students are expected to complete 4 hours of guided learning via	
	online preparation, lectures, interactive workshops, tutorials, discussion	
	groups or self-directed learning and an additional 6 hours of	
	independent study per week.	
Unit Weighting	10 units	
Pre-requisites	Students must have successfully completed ACFI2070 to enrol in this	
	course.	
Workload	Students are required to spend on average 120-140 hours of effort	
	(contact and non-contact) including assessments per 10 unit course.	
	rse CANVAS site for details of teaching staff for ALL course	
	contact for courses is the Course Coordinator, whose details are	
listed on the course C/		
Student Consultation	A minimum of one (1) hour of consultation per week. Please see course CANVAS site for details of time and location.	
Course Learning	On successful completion of this course, students will be able to:	
Outcomes	1. Comprehend the nature and pricing of options contracts together	
Outcomes	with their uses in portfolio management and risk reduction	
	strategies;	
	2. Demonstrate what a futures contract is, how futures markets are	
	organised and the determinants of futures prices;	
	3. Interrelate the system of deposits, margins and marking-to-market	
	used by futures exchanges;	
	4. Interpret and explain speculation and hedging strategies using	
	futures contracts, inclusive of reasons for imperfection;	
	5. Define the features of the major financial contracts traded on the	
	Sydney Futures Exchanges and analyse the speculation and	
	hedging strategies using their futures contracts;	
	<ol><li>Explain the uses of forward-rate agreements;</li></ol>	
	<ol><li>Identify the major types and characteristics of options, distinguish</li></ol>	
	between options and futures, and expound the factors that affect	
	option prices;	
	8. Apply basic option pricing theorems, including put-call parity;	
	9. Examine the Black-Schols and binomial option pricing models	
	and how they are used to calculate option prices;	
	10. Explain the characteristics and uses of foreign currency options;	
	11. Work individually or in teams to analyse and communicate	www.newcastle.edu.au
	investment information leading to independent investment	CRICOS Provider
	decision making; and 12. Evaluate different financial paradigms and outcomes to inform	00109J
	and direct personal and professional learning.	
	and aireor personal and professional learning.	





# ASSESSMENTS

This course has 3 assessments. Each assessment is described in more detail in the sections below:

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Mid Semester Quiz	Week 7	Individual	25%	2, 3, 4, 5, 6
2	Assignment	Sunday, Week 10 by 11:59 pm	Individual	25%	2, 3, 4, 5, 11
3	Final Examination	Examination Period	Individual	50%	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Please note: students are advised that all assessments must be submitted in English. Assessment items <u>not</u> submitted in English will receive a mark of zero.

Results of individual assessment items and final results, including those provided via the Learning Management System (LMS) are 'unofficial results' until they are confirmed as finalised by the School Assessment Body and the Head of School or delegate. Finalised results are released directly to students on the Fully Graded Date of the relevant Semester/Trimester.

### Time referenced is time in Newcastle NSW

Late Submissions	The mark for an assessment item submitted after the designated time on the due date,	
	without an approved extension of time, will be reduced by 10% of the possible maximum	
	mark for that assessment item for each day or part day that the assessment item is late.	
	Note: this applies equally to week and weekend days.	

### Assessment 1 – Mid Semester Quiz

Assessment Type	Quiz
Purpose	The purpose of this quiz is to assess students' capacity to apply critical thinking and
	analytical problem-solving skills to provide reasoned and appropriate responses to
	questions.
Description	In this guiz you will be required to answer multiple-choice and short-answer questions.
•	You will be required to apply critical thinking and analytical problem-solving skills to
	provide reasoned and appropriate responses to the questions.
	The quiz will cover the first five lecture topics (all of the material covered in Chapter 17 of
	the textbook) and will include questions that are practical and theoretical in nature.
Weighting	25%
Length	90 minutes (including reading time)
Due Date	A date to be determined in week 7
Submission Method	In Class
Assessment Criteria	The following five (5) criteria will be applied:
	<ul> <li>Demonstrated understanding of theory and relevant concepts.</li> </ul>
	<ul> <li>Demonstrated application of financial mathematics to solve problems.</li> </ul>
	<ul> <li>Accuracy of information/argument.</li> </ul>
	<ul> <li>Clarity of expression.</li> </ul>
	<ul> <li>Relevance of answer to the question.</li> </ul>
Return Method	In Class/Online
Feedback Provided	Online - Solutions will be provided on the CANVAS site and discussed in tutorials.
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Assessment 2 -	Written Assignment
Assessment Type	Written Assignment
Purpose	The purpose of this assignment is to assess students' capacity to demonstrate via a
·	trading application their knowledge of what a futures contract is, how futures markets are
	organised and the determinants of futures prices. It also assesses their understanding of
	the system of deposits, margins and marking-to-market used by futures exchanges and
	their ability to interpret and explain speculation and hedging strategies using futures
	contracts, inclusive of reasons for imperfection. It also assesses their understanding of
	the major financial contracts traded on the derivatives exchange.
Description	Students apply critical thinking and problem solving in assessing how to apply their
-	futures trading strategies and effectively communicate those strategies through a written
	report
Weighting	25%
Length	1500 words
5	



Due Date	Sunday of week 10 by 11:59 pm
Submission Method	Online – via Turnitin
Assessment Criteria	Five (5) criteria will be used:
	<ul> <li>Demonstrated understanding of theory and relevant concepts.</li> <li>Demonstrated application of financial tools in relevant business decision making.</li> </ul>
	<ul> <li>Depth and relevance of analysis.</li> </ul>
	<ul> <li>Logic and reasoning of arguments.</li> </ul>
	<ul> <li>Structure and presentation of the report.</li> </ul>
Return Method	Not returned
Feedback Provided	Online - Solutions to the assignment will be provided on CANVAS prior to the
	examination to allow timely feedback.
Assessment 3 - F	inal Examination
Assessment Type	Formal Examination
Purpose	In this exam you will be required to answer multiple-choice and short-answer questions.
•	You will be required to apply critical thinking and analytical problem-solving skills to
	provide reasoned and appropriate responses to the questions.
Description	The exam will cover the ALL of the material covered in the course and will include
	questions that are practical and theoretical in nature.
	This course has a <b>RESTRICTED OPEN BOOK</b> examination. A memory aid is
	permitted. The memory aid is a single double sided A4 sheet of handwritten or typed notes for use during the examination. Note: memory aids must be left on the
	examination table and cannot be removed from the examination venue.
Weighting	50%
Length	120 minutes
Due Date	Formal Examination Period
Submission Method	Formal Exam
Assessment Criteria	The following five (5) criteria will be applied:
	<ul> <li>Demonstrated understanding of theory and relevant concepts</li> </ul>
	<ul> <li>Demonstrated application of financial mathematics to solve problems</li> </ul>
	<ul> <li>Accuracy of information/argument</li> </ul>
	<ul> <li>Clarity of expression</li> </ul>
	<ul> <li>Relevance of answer to the question</li> </ul>
Return Method	Not Returned
Feedback Provided	No Feedback. Examination scripts will not be returned to students. Final examination
	scripts will be made available for review by students, upon request, in a controlled and monitored setting. Students are required to make requests, directly to the relevant
	course coordinator. Completed examination scripts are kept by the Newcastle Business
	School for a period of six (6) months only, from the relevant fully graded date. Requests
	made after the six (6) month period <b>cannot</b> be considered.
<b>SYLLABUS</b>	
Course Content	Topics in the course include but are not limited to the following:
	Covers analysis of derivative securities, binomial option pricing, put-call parity for stock
	options and the like.
Course Materials	Recommended text:
	Peirson, G., Brown, R., Easton, S., Howard, P. and Pinder, S, Business Finance, 12th ed.
	(2015) – McGraw-Hill – North Ryde
	<b>ISBN</b> : 978-1-74307-897-6
	Please refer to the course CANVAS site for details of additional recommended texts.



# SCHEDULE

Week	Торіс	Class Preparation	Workshop Activities
1	Introduction to Futures Markets	Read Peirson et al. Chapter 17, sections 17.1-17.4	
2	Futures Market Strategies	Read Peirson et al. Chapter 17, sections 17.5-17.6, 17.8	
3	Futures Market Strategies (continued)	Read Peirson et al. Chapter 17, sections 17.5-17.6, 17.8	
4	Futures Market Strategies (continued)	Read Peirson et al. Chapter 17, sections 17.5-17.6, 17.8	
5	Financial Futures Contracts	Read Peirson et al. Chapter 17, sections 17.7 and 17.9	
6	Financial Futures Contracts (continued)	Read Peirson et al. Chapter 17, sections 17.7 and 17.9	
7	Mid-Semester Quiz		Assessment 1 due: Mid Semester quiz. Date and time to be advised on CANVAS.
8	Introduction to Options Market	Read Peirson et al. Chapter 18, sections 18.1-18.2	
9	Introduction to Options Market (continued)	Read Peirson et al. Chapter 18, sections 18.1-18.2	
10	Put-Call Parity	Read Peirson et al. Chapter 18, section 18.2	Assessment 2 due: Sunday, Week 10 by 11:59 pm
11	Binomial Option Pricing	Read Peirson et al. Chapter 18, section 18.3	
12	Foreign Currency Options	Read Peirson et al. Chapter 18, section 18.5	
13	Course Review		

coordinator on the course CANVAS site.



## CONTACTS

#### **School Office**

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#### **PSB** Academy Enquiries

Log your question or request to the PSB Program Executives at the following website: http://www.psb-academy.edu.sg/enq +65 6390 9000

#### Newcastle Australia Institute of Higher Education Pte Ltd

100 Victoria Street #13-01/02 National Library Building Singapore <u>Singapore-StudentCentral@newcastle.edu.au</u> +65 6221 3306

## ADDITIONAL INFORMATION

#### **Grading Scheme**

### This course is graded as follows:

Range of Grade Description Marks 85-100 Outstanding standard indicating comprehensive knowledge High Distinction and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of (HD) skills\*; and achievement of all assessment objectives. 75-84 Distinction Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of (D) a very high level of academic ability; sound development of skills\*; and achievement of all assessment objectives. 65-74 Credit Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a (C) high level of academic achievement; reasonable development of skills\*; and achievement of all learning outcomes. 50-64 Pass Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials: demonstration of an (P) adequate level of academic achievement; satisfactory development of skills\*; and achievement of all learning outcomes. 0-49 Fail Failure to satisfactorily achieve learning outcomes. If all (FF) compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

\*Skills are those identified for the purposes of assessment task(s).



Communication	Communication methods used in this course include:		
Methods	- CANVAS Course Site: Students will receive communications via the posting of		
	content or announcements on the CANVAS course site.		
	- Email: Students will receive communications via their student email account.		
	<ul> <li>Face to Face: Communication will be provided via face to face meetings or</li> </ul>		
	supervision.		
Course Evaluation	Each year feedback is sought from students and other stakeholders about the courses		
	offered in the University for the purposes of identifying areas of excellence and potential		
	improvement.		
Oral Interviews (Vivas)			
	(viva) may be conducted. The purpose of the oral examination is to verify the authorship of		
	the material submitted in response to the assessment task. The oral examination will be		
	conducted in accordance with the principles set out in the Oral Examination (viva)		
	Procedure. In cases where the oral examination reveals the assessment item may not be		
	the student's own work the case will be dealt with under the Student Conduct Rule.		
Academic Misconduct			
	standards reinforce the importance of integrity and honesty in an academic environment.		
	Academic Integrity policies apply to all students of the University in all modes of study and		
	in all locations. For the Student Academic Integrity Policy, refer to		
A shuana a	https://policies.newcastle.edu.au/document/view-current.php?id=35.		
Adverse	The University acknowledges the right of students to seek consideration for the impact of		
Circumstances	allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the		
	online Adverse Circumstances system where:		
	1. the assessment item is a major assessment item; or		
	<ol> <li>the assessment item is a minor assessment item and the Course Co-ordinator has</li> </ol>		
	specified in the Course Outline that students may apply the online Adverse		
	Circumstances system;		
	3. you are requesting a change of placement; or		
	4. the course has a compulsory attendance requirement.		
	Before applying you must refer to the Adverse Circumstances Affecting Assessment Items		
	Procedure available at:		
	https://policies.newcastle.edu.au/document/view-current.php?id=236		
Important Policy	The Help button in the Canvas Navigation menu contains helpful information for using the		
Information	Learning Management System. Students should familiarise themselves with the policies		
	procedures at https://www.newcastle.edu.au/current-students/no-room-for/policies-and-		
<b></b> .	procedures that support a safe and respectful environment at the University.		
This course outline was and	proved by the Head of School. No alteration of this course outline is permitted without Head of School		

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.

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