Newcastle Business School

ACFI3130: Derivative Securities 2024

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

MISSION: Our mission is to advance responsible and impactful business knowledge. To achieve our mission, we develop life ready graduates and build global and local partnerships through ethical and innovative practices.

OVERVIEW

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

Workshop

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 Pre-requisites

10 units

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.

Please refer to the course CANVAS site for details of teaching staff for ALL course offerings. The primary contact for courses is the Course Coordinator, whose details are listed on the course CANVAS site.

Course Learning Outcomes

On successful completion of this course, students will be able to:

- Comprehend the nature and pricing of options contracts together 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-tomarket used by futures exchanges:
- 4. Interpret and explain speculation and hedging strategies using futures contracts, inclusive of reasons for imperfection;
- Define the features of the major financial contracts traded on the Sydney Futures Exchange and analyse the speculation and hedging strategies using their futures contracts;
- 6. Explain the uses of forward-rate agreements;
- 7. Identify the major types and characteristics of options, distinguish 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-Scholes 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 investment information leading to independent investment decision making; and
- 12. Evaluate different financial paradigms and outcomes to inform and direct personal and professional learning.



www.newcastle.edu.au CRICOS Provider 00109J



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 SGT	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.

Late Submissions	Ibmissions 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

auestions.

Description

In this quiz 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

lethod In Class

Assessment Criteria The following five (5) criteria will be applied:

- Demonstrated understanding of theory and relevant concepts.
- Demonstrated application of financial mathematics to solve problems.
- Accuracy of information/argument.
- Clarity of expression.
- Relevance of answer to the question.

Return Method Feedback Provided In Class/Online

Online - Solutions will be provided on the CANVAS site and discussed in tutorials.

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

Due Date Sunday of week 10 by 11:59 pm SGT



Submission Method Assessment Criteria Online - via Turnitin

Five (5) criteria will be used:

- Demonstrated understanding of theory and relevant concepts.
- Demonstrated application of financial tools in relevant business decision making.
- Depth and relevance of analysis.
- Logic and reasoning of arguments.
- Structure and presentation of the report.

Return Method Feedback Provided Not returned

Online - Solutions to the assignment will be provided on CANVAS prior to the

examination to allow timely feedback.

Assessment 3 - Final 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 **RESTRICTED OPEN BOOK** 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.

50%

Weighting Length

120 minutes

Due Date

Formal Examination Period

Submission Method

Formal Exam

Assessment Criteria

The following five (5) criteria will be applied:

- Demonstrated understanding of theory and relevant concepts
- Demonstrated application of financial mathematics to solve problems
- Accuracy of information/argument
- Clarity of expression
- Relevance of answer to the question

Return Method Feedback Provided Not Returned

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

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 cannot be considered.

SYLLABUS

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

ISBN: 978-1-74307-897-6

Please refer to the course CANVAS site for details of additional recommended texts.



SCHEDULE

Week	Topic	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 SGT
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		

If a lecture/class is scheduled on a public holiday, a make-up lecture may be announced by the course coordinator on the course CANVAS site.



CONTACTS

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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

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ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	(D) and understanding of the relevant materials; demonstra a very high level of academic ability; sound developm skills*; and achievement of all assessment objectives.	
65-74		
(P) understanding of the relevant madequate level of academic development of skills*; and a outcomes. O-49 Fail Failure to satisfactorily achieve compulsory course components		Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
		Failure to satisfactorily achieve learning outcomes. If all 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 Methods

Communication methods used in this course include:

- 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.
- Face to Face: Communication will be provided via face to face meetings or 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)

As part of the evaluation process of any assessment item in this course an oral examination (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.

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honorty in an academic environment.

Academic Misconduct

All students are required to meet the academic integrity standards of the University. These 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 https://policies.newcastle.edu.au/document/view-current.php?id=35.

Adverse Circumstances

The University acknowledges the right of students to seek consideration for the impact of 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
- the assessment item is a minor assessment item and the Course Co-ordinator has 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 Information

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures that support a safe and respectful environment at the University.

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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