

ACFI3130: Derivative Securities BINUS 2024



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

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 2 hour(s) per Week for Full Term |
| Unit Weighting | 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. 10 units |
| Assumed Knowledge & Pre-Requisites | Any Assumed Knowledge or Pre-Requisites for this course have been previously satisfied by the successful completion of courses within the approved student study plan. |
| Workload | Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course. |
| Course Learning Outcomes | On successful completion of this course, students will be able to: <ol style="list-style-type: none">1. 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-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 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; and12. Evaluate different financial paradigms and outcomes to inform and direct personal and professional learning. |

COURSE OUTLINE

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 | 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 not 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 Jakarta, Indonesia

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| 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. |
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Assessment 1 – Mid Semester Quiz

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| 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 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 | In Class |
| Assessment Criteria | The following five (5) criteria will be applied: <ul style="list-style-type: none"> – 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 | In Class/Online |
| Feedback Provided | Online - Solutions will be provided on the CANVAS site and discussed in tutorials. |

Assessment 2 - Written Assignment

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| 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 |

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| Due Date | Sunday of week 10 by 11:59 pm |
| Submission Method | Online – via Turnitin |
| Assessment Criteria | Five (5) criteria will be used: <ul style="list-style-type: none"> – 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 | Not returned |
| Feedback Provided | Online - Solutions to the assignment will be provided on CANVAS prior to the examination to allow timely feedback. |

Assessment 3 - Final Examination

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| 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. |
| 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 style="list-style-type: none"> – 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 | 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 cannot be considered. |

SYLLABUS

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| Course Content | <p>Topics in the course include but are not limited to the following:</p> <p>Covers analysis of derivative securities, binomial option pricing, put-call parity for stock options and the like.</p> |
| Course Materials | <p>Recommended text:</p> <p>Peirson, G., Brown, R., Easton, S., Howard, P. and Pinder, S, <i>Business Finance</i>, 12th ed. (2015) – McGraw-Hill – North Ryde</p> <p>ISBN: 978-1-74307-897-6</p> <p>Please refer to the course CANVAS site for details of additional recommended texts.</p> |

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 |
| 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 | | |

CONTACTS

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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 | Distinction (D) | Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives. |
| 65-74 | Credit (C) | Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes. |
| 50-64 | Pass (P) | 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. |
| 0-49 | Fail (FF) | 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

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

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

**Adverse
Circumstances**

<https://policies.newcastle.edu.au/document/view-current.php?id=35>.

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
2. 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 for Students' tab in UoNline contains important information that all students should be familiar with, including various systems, policies and procedures.

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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