

FB6862P: DERIVATIVES AND APPLICATIONS

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Derivatives and Applications

Subject Code

FB - College of Business (FB)

Course Number

6862P

Academic Unit

College of Business (CB)

College/School

College of Business (CB)

Course Duration

Non-standard Duration

Other Course Duration

2 days

Credit Units

1

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

Chinese (Putonghua)

Medium of Assessment

Chinese

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This course aims to facilitate students' learning of financial derivative instruments, pricing, and the practice of risk management. Upon completion of this course, students are able to price a variety of derivatives; use option, futures, and swaps to do arbitrage and to form hedging portfolios; and can use derivative securities to manage the risk of financial assets.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Understand the basic knowledge of derivative securities and risk management	40	x	x	x
2	Know how to price different financial derivatives	40	x	x	x
3	Apply option, futures, and swaps to do arbitrage and to form hedging portfolios	10	x	x	x
4	Use derivative securities to manage the risk of financial assets	10	x	x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures and presentations	by professor to communicate factual and "how to" knowledge.	1, 2, 3	
2	In-class cases/exercises	to develop intellectual and practical skills that apply basic knowledge for different derivative instruments.	1, 2, 3, 4	
3	Discussions in class and off-class	to provide relevant experience	1, 2, 4	

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?
1	Class Contribution	1, 2, 3	30	-	Yes
2	Individual assignment	1, 2, 3	50	-	Yes

3	Individual & group exercises	1, 2, 3, 4	20	-	Yes
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Continuous Assessment (%)

100

Assessment Rubrics (AR)**Assessment Task**

1. Class contribution (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Excellent

(A+, A, A-) Strong evidence of class contribution through class exercises, and active and insightful class participation. Punctual and nearly full attendance

Good

(B+, B, B-) Evidence of class contribution through class exercises and regular class participation. Punctual and nearly full attendance

Fair

(C+, C, C-) Some evidence of class contribution thorough class exercises and preparation. Regular class attendance with occasional absences and lateness.

Marginal

(D) Minimum class contribution. Multiple absences and/or late attendance.

Failure

(F) No evidence of adequate class contribution through exercises or in-class discussion.

Assessment Task

2. Individual assignment (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Excellent

(A+, A, A-) Strong evidence of original thinking; good organization, capacity to organize and synthesize with superior grasp of the subject matter; evidence of extensive knowledge base.

Good

(B+, B, B-) Evidence of a grasp of the subject with indications of critical capacity and analytical ability; reasonable understanding of the issues with good responses to the questions.

Fair

(C+, C, C-) Evidence of learning from the course; show some ability to think analytically and to offer adequate responses to the questions.

Marginal

(D) Sufficient familiarity with the subject and of ability to respond to the questions as to justify consideration of the student for progression.

Failure

(F) Little evidence of familiarity with the subject matter; poor critical and analytical skills; ignorance of class knowledge.

Assessment Task

3. Individual/ Group exercises (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Excellent

(A+, A, A-) Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good

(B+, B, B-) Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with class knowledge.

Fair

(C+, C, C-) Evidence of learning from the course; understanding of the subject; ability to develop solutions to simple problems.

Marginal

(D) Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

Failure

(F) Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited or irrelevant use of class knowledge.

Assessment Task

1. Class contribution (for students admitted from Semester A 2022/23 to Summer Term 2024)

Excellent

(A+, A, A-) Strong evidence of class contribution through class exercises, and active and insightful class participation. Punctual and nearly full attendance

Good

(B+, B) Evidence of class contribution through class exercises and regular class participation. Punctual and nearly full attendance

Marginal

(B-, C+, C) Minimum class contribution. Multiple absences and/or late attendance.

Failure

(F) No evidence of adequate class contribution through exercises or in-class discussion.

Assessment Task

2. Individual assignment (for students admitted from Semester A 2022/23 to Summer Term 2024)

Excellent

(A+, A, A-) Strong evidence of original thinking; good organization, capacity to organize and synthesize with superior grasp of the subject matter; evidence of extensive knowledge base.

Good

(B+, B) Evidence of a grasp of the subject with indications of critical capacity and analytical ability; reasonable understanding of the issues with good responses to the questions.

Marginal

(B-, C+, C) Sufficient familiarity with the subject and of ability to respond to the questions as to justify consideration of the student for progression.

Failure

(F) Little evidence of familiarity with the subject matter; poor critical and analytical skills; ignorance of class knowledge.

Assessment Task

3. Individual/ Group exercises (for students admitted from Semester A 2022/23 to Summer Term 2024)

Excellent

(A+, A, A-) Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good

(B+, B) Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with class knowledge.

Marginal

(B-, C+, C) Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

Failure

(F) Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited or irrelevant use of class knowledge.

Part III Other Information

Keyword Syllabus

- Introduction: Derivative Instruments
- Forward and Futures
- Properties of Forward Contract and Forward Market
- Properties of Future Contract and Future Market
- Comparison of Forward vs. Future
- Pricing of Forward and Future
 - Swaps
- Properties of Swap Contract and Swap Market
- Properties of Interest Swap and its Pricing
- Properties of Currency Swap and its Pricing
- Hedging in Practice
 - Option
- Properties of Options
- Trading Strategies
- Options Pricing
- Hedging in Practice: Case Studies

Reading List**Compulsory Readings**

Title	
1	Options, Futures, and Other Derivatives Tenth Edition, by HULL, John C. Published by Prentice Halls.

Additional Readings

Title	
1	A package of finance articles