

EF5551P: FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Financial Instruments and Risk Management

Subject Code

EF - Economics and Finance

Course Number

5551P

Academic Unit

Economics and Finance (EF)

College/School

College of Business (CB)

Course Duration

Non-standard Duration

Other Course Duration

Intensive mode: 3 days

Credit Units

1.5

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

Other Languages

Other Languages for Medium of Instruction

Putonghua supplemented by English

Medium of Assessment

Chinese

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details**Abstract**

This course aims to introduce the students to the use, pricing and hedging of basic financial derivatives such as futures, forwards, options and swaps and the principles of financial risk management. Upon completion of this course, students will be able to apply a variety of derivatives models; use options, futures contracts, and swaps to do arbitrage and to form hedging portfolios; and 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	Evaluate and price basic financial derivative products.	35	x	x	
2	Use basic financial derivative products to hedge market risk.	35		x	x
3	Design strategies that alter the risk exposure of companies or institutions exposed to financial risk.	30	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	Students will learn the basic concepts and structure of financial instruments and risk management. The lecturer will encourage students to think critically and logically, and to solve the problems by themselves.	1, 2, 3	

2	Problem Solving	Students will solve problems that focus on the prevailing risk management strategies adopted by companies. Students are expected to apply the risk-management theories and to critically analyze the related issues in the financial market.	1, 2, 3	
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Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?
1	In-class Discussion/ Activities/ Quizzes Students need to participate actively in in-class activities such as case study and topical discussion designed to facilitate their appreciation of course knowledge.	1, 2, 3	50	-	Yes
2	Individual Assignment Students will be assessed via the individual homework their ability to analyze and apply on derivative products decisions.	1, 2, 3	50	-	Yes

Continuous Assessment (%)

100

Assessment Rubrics (AR)**Assessment Task**

In-class Discussion/ Activities/ Quizzes (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to understand the course materials by completing problem solving questions and exercise as assigned / applying derivatives models to real-life risk management.

Excellent

(A+, A, A-) Demonstrate very strong knowledge in derivatives pricing & hedging, a superior grasp of the critical issues, and strong capability in applying different models.

Good

(B+, B, B-) Demonstrate good knowledge in derivatives pricing & hedging, a good grasp of the critical issues, and strong capability in applying different models.

Fair

(C+, C, C-) Demonstrate adequate knowledge in derivatives pricing & hedging, some knowledge of the critical issues, and sign of awareness of using different models.

Marginal

(D) Demonstrate marginal knowledge in derivatives pricing & hedging, limited knowledge of the critical issues, and no awareness of using different models.

Failure

(F) Demonstrates very little knowledge in derivatives pricing & hedging, no awareness of the critical issues and the use of different models.

Assessment Task

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

Criterion

Ability to master theories and a variety of derivatives models and the capability of applying them in managing the risk of financial assets.

Excellent

(A+, A, A-) Demonstrate very strong knowledge in derivatives pricing & hedging, a superior grasp of the critical issues, and strong capability in applying different models.

Good

(B+, B, B-) Demonstrate good knowledge in derivatives pricing & hedging, a good grasp of the critical issues, and strong capability in applying different models.

Fair

(C+, C, C-) Demonstrate adequate knowledge in derivatives pricing & hedging, some knowledge of the critical issues, and sign of awareness of using different models.

Marginal

(D) Demonstrate marginal knowledge in derivatives pricing & hedging, limited knowledge of the critical issues, and no awareness of using different models.

Failure

(F) Demonstrates very little knowledge in derivatives pricing & hedging, no awareness of the critical issues and the use of different models.

Assessment Task

In-class Discussion/ Activities/ Quizzes (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to understand the course materials by completing problem solving questions and exercise as assigned / applying derivatives models to real-life risk management.

Excellent

(A+, A, A-) Demonstrate very strong knowledge in derivatives pricing & hedging, a superior grasp of the critical issues, and strong capability in applying different models.

Good

(B+, B) Demonstrate good knowledge in derivatives pricing & hedging, a good grasp of the critical issues, and strong capability in applying different models.

Marginal

(B-, C+, C) Demonstrate marginal knowledge in derivatives pricing & hedging, limited knowledge of the critical issues, and no awareness of using different models.

Failure

(F) Demonstrates very little knowledge in derivatives pricing & hedging, no awareness of the critical issues and the use of different models.

Assessment Task

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

Criterion

Ability to master theories and a variety of derivatives models and the capability of applying them in managing the risk of financial assets.

Excellent

(A+, A, A-) Demonstrate very strong knowledge in derivatives pricing & hedging, a superior grasp of the critical issues, and strong capability in applying different models.

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(B+, B) Demonstrate good knowledge in derivatives pricing & hedging, a good grasp of the critical issues, and strong capability in applying different models.

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Part III Other Information

Keyword Syllabus

Futures, Options, Swaps, Options Pricing, Hedging, Risk Management, Market Risk, Value at Risk, Stochastic Processes

Reading List

Compulsory Readings

	Title
1	Options, Futures and Other Derivatives, by John Hull, Pearson 期权,期货及其他衍生产品, John Hull, 机械工业出版社

Additional Readings

Title	
1	Paul Wilmott Introduces Quantitative Finance, by Paul Wilmott, Wiley
2	A Course in Derivative Securities: Introduction to Theory and Computation, by Kerry Back, Springer
3	Dynamic Hedging: Managing Vanilla and Exotic Options, by NN Taleb, Wiley
4	My Life as a Quant: Reflections on Physics and Finance, by Emanuel Derman, Wiley 宽客人生:从物理学家到数量金融大师的传奇, Emanuel Derman, 机械工业出版社