

**City University of Hong Kong  
Course Syllabus**

**offered by Department of Economics and Finance  
with effect from Semester A 2024 / 25**

---

---

**Part I Course Overview**

**Course Title:** **Theoretical Asset Pricing**

**Course Code:** **EF8077**

**Course Duration:** **1 semester**

**Credit Units:** **3**

**Level:** **R8**

**Medium of Instruction:** **English**

**Medium of Assessment:** **English**

**Prerequisites:**  
*(Course Code and Title)* **Nil**

**Precursors:**  
*(Course Code and Title)* **EF8070 Advanced Microeconomics &  
EF5250 Stochastic Calculus Finance**

**Equivalent Courses:**  
*(Course Code and Title)* **Nil**

**Exclusive Courses:**  
*(Course Code and Title)* **Nil**

## Part II Course Details

### 1. Abstract

The objective of the course is to present both theoretical issues and material of practical value in financial economics and to develop students' analytical skills and economic sense of the financial markets through lectures, problem assignments, reading assignments, projects and discussions.

### 2. Course Intended Learning Outcomes (CILOs)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes		
			A1	A2	A3
1.	Design and solve (via Euler-equations) one-period portfolio-choice models; explain the concept of the stochastic discount factor and its use in asset pricing; explain and apply the mean-variance analysis framework; explain the theoretical base of factor models, and their scope and limitations in explaining cross-sectional return distributions.	25%	√	√	√
2.	Describe the basics of representative-agent pricing (CRRA utility and i.i.d. growth); and explain how the basic models can be extended (e.g., Epstein-Zin-Weil utility and predictable growth).	25%	√	√	√
3.	Apply the Black-Scholes model for European-type options by using the concept of stochastic discount factor; explain and solve classical models for default-free bonds; explain the concept of strategic default and solve Leland-type models for the joint pricing of corporate bonds and equity; explain q-theory based on capital accumulation and its equity pricing implications.	25%	√	√	√
4	Explain theoretical models with asymmetric information, beliefs, and associated learning in financial market and their implications on asset pricing.	25%	√	√	√
		100%			

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.*

### 3. Learning and Teaching Activities (LTAs)

LTA	Brief Description	CILO No.				Hours/week (if applicable)
		1	2	3	4	
Lectures, in-class discussions, assignments	Students will engage in formal lectures that will discuss and illustrate the various asset pricing theories and models.	√	√	√	√	Equivalent of 2.5 hours lecture and discussions per week

### 4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.						Weighting	Remarks
	1	2	3	4	5	6		
Continuous Assessment: <u>40</u> %								
Homework assignments, discussions	√	√	√	√	√		20%	
Critical Review						√	20%	
Examination: <u>60</u> % (duration: 3 hours, if applicable)								
Examination	√	√	√	√	√		60%	
							100%	

*Students are required to pass both coursework and examination components in order to pass the course.*

## 5. Assessment Rubrics

Applicable to students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Homework assignments, discussions	Demonstrate the ability to apply the financial economics theories and models to tackle the problem-solving questions and assignments as assigned.	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Discovery based project	Demonstrate the capability to discover, through a project, the performance of selected asset pricing models.					
3. Examination	Demonstrate good understanding of the various financial economics theories and models that were taught in the course.					

Applicable to students admitted from Semester A 2022/23 to Summer Term 2024

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Homework assignments, discussions	Demonstrate the ability to apply the financial economics theories and models to tackle the problem-solving questions and assignments as assigned.	High	Significant	Basic	Not even reaching marginal levels
2. Discovery based project	Demonstrate the capability to discover, through a project, the performance of selected asset pricing models.				
3. Examination	Demonstrate good understanding of the various financial economics theories and models that were taught in the course.				

## Part III Other Information

### 1. Keyword Syllabus

Capital Markets, Asset Pricing, Stochastic Discount Factor, Optimal Portfolio Choice, Mean-Variance analysis, CAPM, Long-Run Risk, Option pricing theory, Term-structure models, Structural Credit Risk, Market microstructure theory, Heterogeneous Beliefs and Preferences, Information Asymmetry and Learning

### 2. Reading List

#### 2.1 Compulsory Readings

1.	Back, Kerry (2017) <u>Asset Pricing and Portfolio Choice Theory</u> , 2ed, Oxford University Press
2.	Costis Skiadas, <u>Asset Pricing Theory</u> , Princeton, 2009.

#### 2.2 Additional Readings

1.	<i>Journal of Finance</i>
2.	<i>Journal of Financial Economics</i>
3.	<i>Review of Financial Studies</i>
4.	<i>Journal of Financial and Quantitative Analysis</i>