BACHELOR OF ECONOMICS
THAMMASAT UNIVERSITY

Course Outline

Course ID : FN411 DERIVATIVES ANALYSIS

Semester 2/2022 January 9 - May 6, 2023

Number of Credit: 3

Prerequisite: FN312

Course Description:

Fundamental principles of derivatives, including futures, forward contracts, options, warrants, swaps, and real options, derivatives pricing models, strategies for speculating or hedging

Course Objectives:

The students who can complete this course should:

- Understand the characteristics of futures, forward, option, warrant, and swap.
- Be able to price the above securities.
- Be able to design the proper strategies for speculating and hedging.

Class Time and Venue:

Date: Thursday

Time: 2pm – 5pm

Venue: Room 304, Faculty of Economics

The class can be changed to on-line format for make-up classes or due to pandemic or any uncertainty.

Teaching Materials Platform: MS Team pb4hnlw

Instructor:

Name: Anutchanat Jaroenjitrkam

Office Hours: Thursday 1pm-2pm, Room 524 TBS Building

Email: anutchanat@tbs.tu.ac.th

Expected Learning Outcomes FN411

1. Morality and Ethics

Applicability	Expected Learning Outcomes	Evaluation Method
N/A	1. Possess honesty, sacrifice, self-social, and environmental responsibility.	
N/A	2. Value "sufficiency" theory and adapt it in life path by adhering to adequacy, rationale, and immunity development.	
●	3. Value disciplines, respect, and comply with the rules and regulations of the institution and society at large.	Class participation
N/A	4. Acquire knowledge related to business morality and ethics, and be able to handle ethical dilemma with integrity.	

2. Knowledge

Applicability	Expected Learning Outcomes	Evaluation Method
N/A	1. Acquire knowledge on and understand the important concepts in business management.	
●	2. Acquire knowledge on and understand the important social and science concepts related to business management.	Quizzes, assignment, and exams

N/A	3. Acquire knowledge on and understand the important concepts related to business processes, planning, corporate structures, operations, control, performance evaluation and contingency plan to suit the circumstances.	
N/A	4. Acquire the knowledge on academic advancement and professional development in business management including the understanding of the situational adaptability and its impacts on business.	

3. Intellectual Development

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Be able to search and process information and utilize various concepts appropriately in a given circumstance in order to obtain relevant information to benefit in the rapidly changing business environment.	Quizzes, assignment, and exams
N/A	2. Be able to think systematically, rationally and creatively and to integrate knowledge from other disciplines to solve the problems in business and other settings.	
N/A	3. Be able to collectively propose solutions to problems at hand and analyze the impacts of the proposed solutions and be able to choose the solution that is appropriate to a given situation to ensure business competitive advantages.	

4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Be able to work in team, possess interpersonal skills and leadership skills, and be professionally adaptive to a given situation.	Group assignment
N/A	2. Be creative and constructively criticize to solve problem of the team.	
N/A	3. Be responsible in lifelong learning to develop self and professional career.	

5. Quantitative Analysis, Communication and Information Technology

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Be able to apply mathematics, statistics, quantitative analysis in analyzing and making decisions in business and daily life.	Quizzes, assignment, and exams
N/A	2. Be able to efficiently communicate in Thai and foreign languages that are relevant in doing Business.	
N/A	3. Be able to explain the issues and make the issues clear in verbal or writing, and be able to choose the appropriate pattern of communication for different groups of audience both in business context and in other contexts.	
N/A	4. Be able to utilize the information technologies or others to support the business operations.	

Remark: ● Primary expected outcome ○ Secondary expected

Main Text:
John C. Hull. Options, Futures, and Other Derivatives. 11th edition or newer version. (M)
Recommended Texts & Materials:
- John C. Hull et al. *Fundamentals of futures and options markets*. 8th edition or newer version.
- R-45 Derivative markets and instruments, R-46 Basic derivative pricing and valuation. 2022 CFA Program Curriculum Level I.

Suggested readings:
** All class materials and assignments will be posted and submitted on MS Teams.

Grading Criteria:

Group Assignment	30%
Midterm Examination	30%
Final Examination	30%
Quiz and homework	10%
Total	**100%**

The grading criteria could be changed subject to the uncertainty.

Total score	0 – 49	50 – 54	55 – 60	60 – 64	65 – 74	75 – 84	85 – 89	90 – 100
Grade	F	D	D+	C	C+	B	B+	A

The above grading criteria is the strictest one. If the overall performance of the class is significantly below these criteria, the instructor can adjust the criteria for the benefit of the students.

Tentative Class Schedule:

Session / Date & Time	Topics	Activities/ Text & Materials*/ Media
12/01/2023	- Introduction to derivatives - Introduction to options	(M) Ch. 1, 10 TFEX (www.tfex.co.th)
19/01/2023	- Basic options valuation	(M) Ch. 11, TFEX
26/01/2023	- Binomial options pricing model	(M) Ch. 13
02/02/2023	- Black-Scholes-Merton options pricing model	(M) Ch. 14, 15
09/02/2023	- Greeks - Volatility smirk	(M) Ch. 19, 20
16/02/2023	- Options strategies for trading and risk management	(M) Ch. 12
23/02/2023	- Introduction to futures market - Data from TFEX	(M) Ch. 2
Mid-term week		
09/03/2023	- Forward and futures prices - Distributing Assignment	(M) Ch. 5
16/03/2023	- Hedging with futures	(M) Ch. 3
23/03/2023	- Interest rate futures and swaps 1	(M) Ch. 6, 7, 33
30/03/2023	- Interest rate futures and swaps 2	(M) Ch. 6, 7, 33
06/04/2023 (Public holiday)	- Interest rate futures and swaps 3	(M) Ch. 6, 7, 33

20/04/2023	- Options on futures, currency derivatives, and exotic options - Assignment 2 is due - https://www.pbs.org/newshour/show/wallstreet (Is the 2015 spending bill a gift to big banks?)	(M) Ch 17, 18, 26
27/04/2023	- Introduction to structured products - Monte Carlo simulation	(M) Ch. 22
04/05/2023 (Public holiday)	- Q&A and wrap up	
Final Exam		