

Course Syllabus

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| 1. Course Number | 2604481 |
| 2. Course Credit | 3 |
| 3. Course Title | Financial Derivatives (อนุพันธ์ทางการเงิน) |
| 4. Faculty/Department | Commerce and Accountancy/Banking and Finance |
| 5. Semester | 2 |
| 6. Academic Year | 2017 |
| 7. Instructor | Assistant Prof. Dr. Anirut Pisedtasalasai
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Office hour: Tuesday 13:00 - 16:00
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Office hour: Monday 15:00 – 16:30 and Tuesday 12:00 – 13:30 |
| 8. Measurement Method | Letter Grade (A B ⁺ B C ⁺ C D ⁺ D F) |
| 9. Type of Course | ☒ Semester Courses ☐ Year Course |
| 10. Course Condition | ☒ Prerequisite ☐ Co-requisite
☐ Conrequisite ☐ Consent of Faculty
☐ None |
| 11. Status | ☐ Compulsory Courses ☒ Elective course |
| 12. Curriculum | Bachelor of Business Administration, sec# 1 |
| 13. Degree | ☒ B.S. ☐ M.A. ☐ Ph.D. ☐ Other |
| 14. Hours/Week | 3 hours, Tuesday 9.00-12.00, Room 307, Building Com 8 |
| 15. Course Description | |

Types of financial derivatives: futures contracts and options contracts; roles and functions of derivative markets; trading and mechanisms of futures markets; pricing models for futures contracts; applications of futures contracts in risk management; features of option-based derivatives; trading strategies for option contracts; option pricing models; Binomial model and Black-Scholes model; applications of options in risk management

16. Course Outline

16.1 Behavioral Objectives

	Behavioral objectives	Learning Outcome*	Teaching Approach	Evaluation Approach
1	The students should have a thoroughly understanding of characteristics of various derivative securities such as forward, futures, options and swaps, and understand the markets where they are traded.	1.1 Possessing Well-round knowledge	Lecture, case study	Written examination
2	The student should have considerable insight as to how these derivative instruments can be used for different investment purposes such as speculating, hedging and arbitraging and be able to use them to form different trading strategies.	1.2 Possessing In-depth knowledge 3.1 Being able to think critically 3.3 Having skills in problem solving 4.2 having professional skills	Lecture, case	Written examination, Oral examination
3	The student should have a good understanding of fundamental pricing models for futures and options such as cost-of-carry model, Binomial Trees and Black-Scholes model, and be able to use them to price these derivative securities.	4.3 Having skills in information technology 4.4 Having mathematical and statistical skills	Lecture, experiment	Examination
4	The students should able to adapt their knowledge to analyse real-world cases related to derivative securities and capable to generate ideas and communicate them to the class.	3.1 Being able to think creatively 5.1 having an inquiring mind 5.2 knowing how to learn	Case, seminar	Examination, Project assessment

16.2 Contents: Weekly topic

	Date	Topics	Objective	Reference
1	9 Jan	Forward and Futures Markets	1, 2	Ch: 1, 2, 3
2	23 Jan			
3	30 Jan	Interest Rates and Forward Rate Agreement (FRA) + Securitization of CDOs and CDSs + Video & Discussion CDOs+CDSs	3, 4	Ch: 4, 8, 24
4	6 Feb	Determination of Forward and Futures Prices	3, 4	Ch: 5
5	13 Feb	Interest rate Futures	1, 2, 3	Ch: 6
6	20 Feb	Swaps + Case discussion: Pine Street	1, 2, 3, 4	Ch: 7
7	27 Feb			
8	9 Mar 13.00-16.00	Mid-Term Exam		Exam
9	13 Mar	Option contract specification, option markets, basics of option pricing	1, 2, 3, 4	Ch: 9, 10
10	20 Mar	Option usages, option strategies, put-call parity	1, 2, 3, 4	Ch: 11
11	27 Mar	Binomial model, delta hedging, pricing American options	1, 2, 3, 4	Ch: 12
12	3 Apr	Black-Scholes-Merton model, implied volatility, Greeks, dynamic hedging	1, 2, 3, 4	Ch: 14
13	10 Apr	Risk management, types of risks, measuring risks, Value-at-Risk	1, 2, 3, 4	Ch: 21
14	24 Apr	Credit risk, components of credit risk, probability of default	1, 2, 3, 4	Ch: 23
15	1 May	Credit derivative pricing, using CDS spread to imply default probability	1, 2, 3, 4	Ch: 24
16	9 May 13.00-16.00	Final exam		Exam

17. Course Evaluation

Type of assessments	Weight to the final grade
Case study (A.Anirut)	15%
In-class Mini-cases (A.Sira)	25%
Mid-term	35%
Final Examination	25%

A = 85-100% B+ = 77-84 % B = 70-76% C+ = 65%-69 C = 60-64 D+ = 55-59% D = 50-54% F = less than 50

18. Teaching Aids

Media

- Power Point Media, Electronic Media, Web Sites, Excel, Derivatives Gem

Connect with Students

E-mail, phone, face-to-face, blackboard

Learning Management system

E-mail, blackboard

19. Reading List

19.1 John C. Hull, Options, Futures and Other Derivatives, 8th edition (2012), Pearson

19.2 รองศาสตราจารย์ ดร.พรอนงค์ บุษราตระกูล และ ผู้ช่วยศาสตราจารย์ ดร.รัฐชัย ศีลาเจริญ, อนุพันธ์ทางการเงิน: การประเมินราคาและการนำไปใช้, พิมพ์ครั้งที่1 (2561)

19.3 Case:

- BWM: Currency Hedging 2007
- Pine Street

19.4 Video:

- www.youtube.com/watch?v=bx_LWm6_6tA

19.5 Web sites:

- www.set.or.th
- www.settrade.com
- www.tfex.or.th
- www.afet.or.th
- www.bex
- <http://finance.yahoo.com>

20. Teaching Evaluation

20.1 Type of Evaluation: CU-CUS, online evaluation

20.2 Changes made in accordance to previous teaching evaluation: updated contents, examples, case used.

20.3 Desired Characteristics of Chulalongkorn Graduates

- Possessing well-rounded and in-depth knowledge
- Having good morals and ethical
- Being community-minded and possessing social responsibility
- Having an inquiring mind and enthusiastic to learn
- Being able to think critically and logically
- Having problem solving, information technology and analytical skills
- Having communication skills and show some leadership qualities

21. CHEATING & DISHONOUS PRATICES

The work you hand in for assessment for credit towards your course must be your own work (or, for a group assessment, the work of the team alone). What is cheating? If you submit material that is wholly or partly someone else's work as your own work then you are cheating. In our eyes cheating includes the following, which are all very similar:

1. **Taking concealed notes into an exam:** You may take into an exam only those objects and papers that are permitted by the Course Supervisor. (You will be advised what they are.) Taking in anything else, especially concealed notes, is cheating.
2. **Collusion:** this is secretly arranging with another person to work jointly on an assessment then submitting it as though it were your own work.

NOTE: This definition of 'collusion' does not stop you discussing with each other, in general, your understanding of the task, how to approach it, and incorporating the ideas coming out of such discussions into your own individual submissions. Talk—but then write it up using your own thoughts and your own words.
3. **Copying from other students:** this is submitting material (in any medium, including computer files) that has been created by another person or persons, whether or not they gave their permission. This includes copying from another person's examination script.
4. **Plagiarism:** this is making use of any material without clear and academically proper acknowledgment of its author or source.

NOTES:

- a. You may feel that you are showing respect for wise authors by using their words. But you show respect only when you acknowledge the quotations as quotations, and name the real authors.
- b. When you name the authors of quotations you cannot be accused of cheating.

But using too many quotations or excessively long quotations without explaining, in your own words, why they are relevant to your argument, will be considered to be poor scholarship and earn a lowered grade.

5. **Ghost writing:** this is having another party (whether paid or not) write work for you to submit. Penalties for cheating can range from zero credit for the work. So prepare for an assessment with your own study, research and thinking. Then take personal pride from writing your submission in your own words.

Pine Street Capital

- You are required to form a group. Each group is required to read one of the following article.
- Write a report maximum of 8 pages that addresses the questions provided below.
 1. What is a hedge fund? How do hedge funds differ from mutual funds?
 2. What risks does PSC want to hedge and what risks is PSC willing to bear? Why?
 3. Are there any alternative methods for the company to manage the risk answered in (2)? Explain.
 4. How would you hedge these risks on July 26 using a short selling strategy? What problems arise with the short-sale strategy?
 5. PSC is considering using options for its hedging program. How does options hedging help with PSC's problems? How would you hedge PSC's portfolio using options on July 26?
- You are allowed to use any other information which are not provided by the case to help addressing the questions given.
- You must also include a separate page for an adequate bibliography, and a cover page providing the names and student numbers of your group members.
- The report is required to be submitted on **26 Feb 2018 by 9.00** to anirut@cbs.chula.ac.th. Fail to submit it in time, a penalty will be applied.
- The case will be discussed in class on **27 Feb 2018**. You are required to participate in class discussion. Fail to participate in the class discussion will be resulted in mark reduction from this assignment.