

HKUST
FINA 551: Options and Futures Markets
Spring 2005

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Course Description: This course deals with the valuation and hedging of options, forward contracts, future contracts and other derivatives. Topics include the pricing of index futures, currency futures, swap and interest futures, option on index, options on currency and option on futures contract. Students will learn how to price these derivatives and how to use these derivatives to reduce risk, and they will also be made aware of the great risk involved when they decide to use derivatives as the tools for speculations..

Texts:

John C, Hull, *Fundamental of Futures and Options Markets*, Fifth Edition. Prentice Hall

Grades Structure

Class Participation	10%
Midterm	35%
Final	40%
Group Project	15%

A typical exam format would include a mixture of quantitative and qualitative problems and questions covering readings, lectures and assignments. Exams are scheduled well in advance so that you can plan around these dates. Please do not ask to be excused from exams as makeup are rarely given . Exam performance will typically be based on both the approach taken and the correctness of the response. So to obtain full credit, *show your work* in a way that enables me to follow your reasoning. The use of calculators will be permitted

You are expected to be attentive; minimal preparation consists of a knowledge of the relevant readings and a careful attempt at the problems. You are, of course, responsible for all material and assignments contained in the syllabus and handouts. I *encourage* you to participate in class, and may utilize participation in determining the final grade of students whose point totals place them near a cutoff point. Class participation includes preparation for class and in class responses. A positive attitude toward the material is important.

Homework

Besides the questions appeared in the notes and handouts, you are also required to work on the assigned problems at the end of chapters. You are encouraged to complete whatever questions and problems are necessary for mastery of the material. The answers to homework will be posted on Webct.

Group Project

There is a group project to be handed in week 12. The maximum number of the members in each group is limited to 4. The project is about evaluating an investment product recently rolled out by Hang Seng Bank. You are asked to utilize what you learn in the first half of the course to determine whether you will invest in this product. You may have to make necessary assumptions and approximations in order to solve the problem. Make sure you make the assumptions explicit and discuss any biases your assumptions might have created to your answer. The information of the project has already been available on the webpage, please plan ahead and work on it early. Any project handed in beyond due date will not be accepted. Since this is a group project, every member will receive the same grade on the project. Make sure you choose your group members carefully and avoid free riders.

Course outline:

1	Introduction	Lecture Note 1
2	Basic Properties of Stock Options	Chapter 8, 9
3	Options Trading Strategy	Chapter 10
4	Binomial Model	Chapter 11
5	Black-Scholes Model	Chapter 12
6	Options on Stock Indices and Currencies	Chapter 13
7	Futures Options	Chapter 14
8	Mechanics of Futures and Forward Markets	Chapter 1, 2
9	The Determination of Forward and Futures Prices	Chapter 5
10	Interest Rate Futures	Chapter 4, 6
11	Swap	Chapter 7