

**Instructor**

Professor Jie Gan (Ph.D. MIT)  
Office Address: 2385 (via Lift 13); Telephone: 2358 7665  
Office hours: Friday 11-12; open-door policy / through appointment  
Email: jgan@ust.hk

**Course Description**

This course is the second part of a derivative course. It provides a deeper understanding of options valuation and its applications. It covers the models of option pricing, including the binomial-tree model and extensions of the Black-Scholes model. It also teaches how to use these models and principles to value various derivative securities and to manage market risk. Cases are used to provide students with experiences of applying these models and principles to complex problems in the real world. Popular instruments in the Hong Kong market (e.g., equity linked notes) will also be discussed.

**Prerequisites**

FINA 529

**Course Materials**

John C. Hull: *Options, Futures, & Other Derivatives*, Prentice Hall  
(Required, available at University Bookstore)  
Articles, cases, homework, etc.  
(Will be made available during classes)

**Course Work**

Class Participation: Necessary but not graded  
Exercises: Questions in the textbook, not graded,  
Cooperation strongly encouraged.  
Two sets of homework: 20% of the course grade, complete individually  
One case: 20% of the course grade, complete by group (3-4 people).  
Final Exam: 60% of the course grade

**Topics and Textbook Reading**

Topics	Textbook
Models of stock prices	11.1-7, 12.1-4 (review)
Binomial tree models	10.1-8, 18.1
The Black-Scholes model	12.5-9, 12.11-12
Dividend and index options	12.13, 13.1-3
Futures and currency options	3.2-9, 13.4-9, 18.2
Managing options risk and Portfolio management with options	3.10, 14.1-10, 14.12-13
Value at risk	16.1-9
Hong Kong Applications (ELN, PDC)	