

Financial Economics

Instructor: Huang, Ji (jihuang@cuhk.edu.hk).

Lectures: Mon 11:30 am – 12:15 pm; Wed 4:30 pm – 6:15 pm.

Teaching Mode: All class meetings are to be conducted online.

Back-up plan: face-to-face teaching and assessment may be resumed when the pandemic stabilizes.

Course Description: This course is an introduction to investments and asset pricing. It provides an overview of financial markets and instruments including stocks, bonds, futures, options, and other derivatives. A risk-return framework is used to think about optimal asset allocation and equilibrium pricing of securities. Topics covered in this course include both classic topics such as no-arbitrage principle, Capital Asset Pricing Model, two-fund separation theorem, and recent behavior models that explore the limits of arbitrage.

Learning Outcomes: Upon successful completion of this course, students are expected to:

- Acquire basic knowledge in asset pricing theory in Finance;
- Develop skills in financial modeling and analysis;
- Becoming a rational retail investor and capable of working for institutional investors.

Prerequisites: Basic knowledge about microeconomics, macroeconomics, calculus, probability and statistics are necessary for students to comprehend the contents in this course.

Course Web Page: Access through Blackboard.

Main References:

- Course Handouts
- (not required) Bodie, Kane and Marcus “*Investments*”, 5th or later edition, McGraw-Hill.
- (not required) McDonald, Robert, “*Derivatives Markets*”, 3rd edition, Pearson.

Course Requirements:

- **Class Participation [5%]:** being engaged during lectures

- **Problem Sets [30%]:** 3 problem sets evenly distributed over the semester
- **Midterm Exam [15%]:** *to be conducted online if the pandemic has not stabilized then*
- **Final Exam [50%]:** *to be conducted online if the pandemic has not stabilized then*

Honesty in Academic Work: Please visit the following web-site for details of university policy on Honesty in Academic Work: <http://www.cuhk.edu.hk/policy/academichonesty/>.

Course Outline:

The sessions outlined below include topics which are going to be covered in this course. These are only approximate and more time will be spent on some topics than others.

1. **Introduction:** the roles of financial markets, financial securities, and how they are traded (optional reading: BKM chapters 1-3)
2. **Relative Pricing**
 - Net present value
 - Bond and term structure of risk-free rate (BKM ch. 14-15)
 - Introduction to Derivatives (McDonald ch. 1.1-1.4 and ch. 2.1-2.4)
 - Pricing Forwards and Futures (McDonald ch. 5.1-5.4)
 - Option Pricing I: put-call parity (McDonald ch. 9.1)
 - Option Pricing II: binomial Option Pricing (McDonald ch. 10.1)
3. **Absolute Pricing**
 - Risk and Risk Aversion (BKM ch. 6)
 - Capital Allocation (BKM ch. 7)
 - Portfolio Choice (BKM ch. 8)
 - Capital Asset Pricing Model (BKM ch.9)
4. **Market Efficiency**
5. **Empirical Asset Pricing**