

THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title	: Master of Arts in Personal Finance Education
Programme QF Level	: 6
Course Title	: Financial Risk Management for Investment
Course Code	: BUS6035
Department	: Social Sciences and Policy Studies
Credit Points	: 3
Contact Hours	: 39
Pre-requisite(s)	: Quantitative Analysis for Financial Studies
Medium of Instruction	: English
Course Level	: 6

Part II

The University's Graduate Attributes and seven Generic Intended Learning Outcomes (GILOs) represent the attributes of ideal EdUHK graduates and their expected qualities respectively. Learning outcomes work coherently at the University (GILOs), programme (Programme Intended Learning Outcomes) and course (Course Intended Learning Outcomes) levels to achieve the goal of nurturing participants with important graduate attributes.

In gist, the Graduate Attributes for Sub-degree, Undergraduate, Taught Postgraduate, Professional Doctorate and Research Postgraduate students consist of the following three domains (i.e. in short "PEER & I"):

- Professional Excellence;
- Ethical Responsibility; &
- Innovation.

The descriptors under these three domains are different for the three groups of participants in order to reflect the respective level of Graduate Attributes.

The seven GILOs are:

1. Problem Solving Skills
2. Critical Thinking Skills
3. Creative Thinking Skills
- 4a. Oral Communication Skills
- 4b. Written Communication Skills
5. Social Interaction Skills
6. Ethical Decision Making
7. Global Perspectives

1. Course Synopsis

This course equips participants for making choices through understanding how to value and to employ derivative securities in a variety of contexts. The first section of this course will explore the fundamental principles on risk with no arbitrage. The second section of the course will explore forward and futures contracts including pricing and applications such as hedging with futures. The third section of this course will study derivative securities with option-like payoffs with an emphasis on no arbitrage pricing restrictions, the binomial option pricing model, the Black-Scholes model, hedging, and applications of option pricing. The final section of the course will give a brief introduction to numerical techniques for valuing derivative securities with an emphasis on risk management.

2. Course Intended Learning Outcomes (CILOs)

Upon completion of this course, participants will be able to:

- CILO₁ critically review the fundamental principles on risk with no arbitrage;
- CILO₂ analyse forward and futures contracts including pricing and applications such as hedging with futures;
- CILO₃ evaluate derivative securities with option-like payoffs with an emphasis on no arbitrage pricing restrictions, the binomial option pricing model, the Black-Scholes model, hedging, and applications of option pricing;
- CILO₄ justify and use numerical techniques for valuing derivative securities with an emphasis on risk management.

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
Price a range of derivative securities. Calculate the theoretical prices of forward, futures and swap contracts on a range of financial and real assets using no-arbitrage arguments.	CILO _{1,2}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Compute the theoretical price of option contracts on a range of financial and real commodities using no-arbitrage arguments and the techniques of risk-neutral valuation. Calculate upper and lower bounds on options prices using no-arbitrage arguments.	CILO _{1,3}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Distinguish between the price of a derivative security and the value of a position in the derivative security.	CILO _{2,3}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions

Identify risk management issues facing investors and corporations. Identify the financial risk facing investors and corporations.	<i>CILO</i> _{1,4}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Identify the instruments that can be employed to hedge the financial risks faced by investors and corporations. Discuss the relative merits of alternative hedging instruments.	<i>CILO</i> _{3,4}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Implement risk management strategies. Determine the number (and position of) derivative contracts that must be employed to hedge a given exposure.	<i>CILO</i> _{2,3,4}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Compute the payoffs from a given hedging strategy. Demonstrate how dynamic hedging strategies can be employed to hedge option risks and provide portfolio insurance.	<i>CILO</i> _{3,4}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Determine the benefits that accrue to parties to a swap arrangement.	<i>CILO</i> _{2,4}	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions

4. Assessment

Assessment Tasks	Weighting (%)	CILO
(a) Individual Assignments Participants will be given individual assignment(s) to analyse risk involved in financial instruments/portfolios and propose measures to managing the risk with reference to the concepts, theories and models learnt in the course	40%	<i>CILO</i> _{1,2,3,4}
(b) Group Risk Management Project Report Participants will form small groups to study on a topic related to risk management in investment. Each	40%	<i>CILO</i> _{1,2,3,4}

group has to submit a project report (2,000-3,000 words) and conduct a presentation by all group members, in which instructor will ask questions to individual participants for individual evaluation.		
(c) Quiz A 1-1.5 hour quiz will be conducted after the completion of all topic discussed in class.	20%	CILO _{1,2,3,4}

5. Required Text(s)

Nil

6. Recommended Readings

- Allen, S. (2013). *Financial Risk Management: A Practitioner's Guide to Managing Market and Credit Risk*. Hoboken, N.J.: Wiley.
- Chartered Institute of Management Accountants (2017). *Risk Management (4th ed.)*. London: BPP Learning Media Ltd.
- Henrik, H., Lindskog, F. Hammarlid, O. & Rehn, C.J. (2012). *Risk and Portfolio Analysis Principles and Methods*. New York: Springer.
- Hull, J. (2018). *Risk Management and Financial Institutions (5th ed.)*. Hoboken, New Jersey: John Wiley and Sons, Inc.
- Hull, J. (2018). *Options, Futures, and Other Derivatives (10th ed.)*. Harlow, England: Pearson.
- Iverson, D. (2013). *Strategic Risk Management: A Practical Guide to Portfolio Risk Management*. Singapore: Wiley.
- Lusardi, A., and Mitchell, O. S. (2011). *Financial Literacy and Planning: Implications for Retirement Wellbeing*. Cambridge, Mass: National Bureau of Economic Research.
- Minimize Risk by Hedging With Derivatives. <https://money.usnews.com/investing/investing-101/articles/2017-12-19/minimize-risk-by-hedging-with-derivatives>
- Roggi, O. & Altman, E. (2013). *Managing and Measuring Risk: Emerging Global Standards and Regulating after the Financial Crisis*. Singapore: World Scientific.
- Wolke, T. (2017). *Risk Management*. Berlin: De Gruyter Oldenbourg.

7. Related Web Resources

- Global Association of Risk Professionals <https://www.garp.org/>
- Professional Risk Managers' International Association <https://prmia.org/>
- CFA Institute <https://www.cfainstitute.org/>
- The Balance - Hedging and How It Works With Examples <https://www.thebalance.com/hedge-what-it-is-how-it-works-with-examples-3305933>

8. Related Journals

Journal of Risk and Uncertainty

The Journal of Risk Finance
Review of Derivatives Research
Journal of Finance
Review of Quantitative Finance and Accounting
International Journal of Managerial Finance
The Review of Financial Studies

9. Academic Honesty

The University upholds the principles of honesty in all areas of academic work. We expect our students to carry out all academic activities honestly and in good faith. Please refer to the Policy on Academic Honesty, Responsibility and Integrity (<https://www.eduhk.hk/re/uploads/docs/00000000016336798924548BbN5>). Students should familiarize themselves with the Policy.

10. Others

Nil