

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 : Investment Analysis and Risk Management
Course Code : BUS6073
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 provides an integrated framework in investment analysis, portfolio management, and financial risk management for participants. Course participants will be introduced to the various investment vehicles, their risk, return, and liquidity characteristics, and learn to form investment portfolios and asset allocation. The course covers performance evaluation using metrics like Sharpe ratio, alpha, and beta, and benchmarking against relevant indices. It also addresses the identification and assessment of financial risks, including market, credit and liquidity, and the implementation of risk management strategies such as hedging with derivatives, diversification, and insurance products. This course equips participants with the skills and knowledge to make informed financial decisions and manage investment risks effectively.

2. Course Intended Learning Outcomes (CILOs)

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

- CILO₁ Critically examine diverse investment vehicles and strategies available in the market, including stocks, bonds, mutual funds, and alternative investments, by assessing their risk, return, and liquidity.
- CILO₂ Analyze and determine the allocation of financial assets by forming and managing investment portfolios, applying portfolio optimization techniques to achieve desired risk-return profiles and adapting to changing market conditions.
- CILO₃ Evaluate the performance of investment portfolios containing various financial instruments using metrics such as Sharpe ratio, alpha, and beta, and benchmark against relevant indices and peer groups.
- CILO₄ Identify and assess financial risks investors and corporations facing, including market risk, credit risk, liquidity risk, and operational risk, using appropriate risk assessment tools and techniques.
- CILO₅ Implement risk management strategies to mitigate identified risks, including hedging with derivatives, diversification, and the use of insurance products, tailored to specific investment goals and risk appetites.

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
Introduction to Investment Analysis and Risk Management: This topic provides an overview of various investment vehicles and strategies, emphasizing the importance of risk management in investment decisions.	<i>CILO_{1, 2}</i>	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Portfolio Theory and Asset Allocation: Participants will learn about portfolio optimization techniques, asset allocation strategies, and the benefits of diversification.	<i>CILO_{1, 2}</i>	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Capital Market Theory and Asset Pricing Models: This section covers the Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), and market efficiency theory.	<i>CILO_{1, 2, 3}</i>	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions

Fundamental and Technical Analysis: This topic includes economy/market analysis, sector/industry analysis, company analysis, and technical analysis.	<i>CILO_{1, 2, 3}</i>	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Investment Performance Evaluation: Students will explore performance metrics such as the Sharpe ratio, alpha, and beta, and learn how to benchmark portfolio performance against relevant indices.	<i>CILO_{1, 2, 3}</i>	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Risk Identification and Assessment: This section focuses on identifying and assessing various financial risks, including market, credit, liquidity, and operational risks, using appropriate tools and techniques.	<i>CILO_{4, 5}</i>	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Risk Management Strategies: Students will learn about hedging with derivatives, diversification, and the use of insurance products to develop and implement risk management plans.	<i>CILO_{4, 5}</i>	Lecture; lecturer-led questions and answers (Q&A); problem-based learning activities; group discussions
Derivative Pricing: Participants will be introduced to the basics of bond pricing and derivative securities, including options, futures, and swaps.	<i>CILO_{4, 5}</i>	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) on investment analysis and portfolio management during the course. These exercises will utilize Python or Kahoot to enhance student motivation and encourage active participation.	30%	<i>CILO_{1,2,3,4,5}</i>
(b) Group Project on Investment Management Participants (4 to 6 students) will form small groups to study on a topic related to risk management or investment analysis. Each 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. The course instructor will provide clear guidelines for students on	40%	<i>CILO_{1,2,3,4,5}</i>

how to prepare effectively.		
(c) Examination A 2-hour examination will be conducted at the end of the course to test the understanding and application of concepts in investment analysis and risk management	30%	<i>CILO_{1,2,3,4,5}</i>

5. Use of Generative AI in Course Assessments

Please select one option only that applies to this course:

☐ **Not Permitted:** In this course, the use of generative AI tools is not allowed for any assessment tasks.

☒ **Permitted:** In this course, generative AI tools may be used in some or all assessment tasks. Instructors will provide specific instructions, including any restrictions or additional requirements (e.g., proper acknowledgment, reflective reports), during the first lesson and in relevant assessment briefs.

6. Required Text(s)

Nil

7. Recommended Readings

- Allen, S. (2013). *Financial Risk Management: A Practitioner's Guide to Managing Market and Credit Risk*. Hoboken, N.J.: Wiley.
- Bodie, Z., Kane, A. & Marcus A.J. (2017). *Essentials of Investments (10th ed.)*. Irwin: McGraw-Hill.
- Bowles S. (2006). *Microeconomics: Behavior, Institutions, and Evolution*. Princeton, NJ: Princeton University Press.
- Bulkowski, Thomas, N. (2012). *Fundamental Analysis and Position Trading: Evolution of a Trader*. Wiley.
- Chartered Institute of Management Accountants (2017). *Risk Management (4th ed.)*. London: BPP Learning Media Ltd.
- for Retirement Wellbeing. Cambridge, Mass: National Bureau of Economic Research.
- Grinold, R.C., Kahn, R. N. (2000). *Active Portfolio Management A Quantitative Approach for Providing Superior Returns and Controlling Risk (2nd ed.)*. McGraw-Hill.
- Guerard, J.B., Markowitz, H., Xu, G. (2015). Earnings forecasting in a global stock selection model and efficient portfolio construction and management. *International Journal of Forecasting* 31: 550–560.
- Henrik, H., Lindskog, F. Hammarlid, O. & Rehn, C.J. (2012). *Risk and Portfolio Analysis Principles and Methods*. New York: Springer.
- Hull, J. (2018). *Options, Futures, and Other Derivatives (10th ed.)*. Harlow, England: Pearson.
- Hull, J. (2018). *Risk Management and Financial Institutions (5th ed.)*. Hoboken, New Jersey: John Wiley and Sons, Inc.
- 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*
- Markowitz, H., Dijk, E. (2008). Risk-return analysis. *Handbook of Asset and Liability Management 1*: 139–197.

Minimize Risk by Hedging With Derivatives.
<https://money.usnews.com/investing/investing-101/articles/2017-12-19/minimize-risk-by-hedging-with-derivatives>

Peris, D. (2018). *Getting Back to Business: Why Modern Portfolio Theory Fails Investors and How You Can Bring Common Sense to Your Portfolio*. New York: McGraw-Hill Education.

Pettijohn, J. B., Ragan, G. A., & Ragan, K. P. (2003). On-line investment analysis and portfolio management: using learning outcome statements to design projects. *Journal of Education for Business*, 78(4), 185-190.

Roggi, O. & Altman, E. (2013). *Managing and Measuring Risk: Emerging Global Standards and Regulating after the Financial Crisis*. Singapore: World Scientific.

Shinzato, T. (2018). Maximizing and minimizing investment concentration with constraints of budget and investment risk, *Physica A*, 490: 986–993.

Way R., Lafond F., Lillo F., et al. (2019). Wright meets Markowitz: How standard portfolio theory changes when assets are technologies following experience curves. *Journal of Economic Dynamic Control*, 101: 211–238.

Way R., Lafond F., Lillo F., et al. (2019). Wright meets Markowitz: How standard portfolio theory changes when assets are technologies following experience curves. *Journal of Economic Dynamic Control*, 101: 211–238.

Wolke, T. (2017). *Risk Management*. Berlin: De Gruyter Oldenbourg.

8. Related Web Resources

Global Association of Risk Professionals
Professional Risk Managers' International
Association

<https://www.garp.org/>

<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>

9. 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

10. 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/000000000016336798924548BbN5>). Students should familiarize themselves with the Policy.

11. Others

Nil

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