

# EF3320: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

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## Effective Term

Semester A 2022/23

## Part I Course Overview

### Course Title

Security Analysis and Portfolio Management

### Subject Code

EF - Economics and Finance

### Course Number

3320

### Academic Unit

Economics and Finance (EF)

### College/School

College of Business (CB)

### Course Duration

One Semester

### Credit Units

3

### Level

B1, B2, B3, B4 - Bachelor's Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

CB3410 Financial Management or FB3410 Financial Management

### Precursors

Nil

### Equivalent Courses

EF3320A Security Analysis and Portfolio Management

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

This course studies classical portfolio theory and standard asset pricing models at an introductory level. After completing the course, students are expected to be able to apply the fundamental principles to analyze stocks and bonds investment problems, formulate trading strategies, and manage financial portfolios. In particular, students will apply the theories and models of portfolio management and act as financial advisors. They will come up with portfolios for their clients and calculate and interpret the risks and returns. This is an introduction to a client-facing career and will encourage students to apply their knowledge in an innovative manner.

### Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Analyze attitudes towards risky investments, discover the different risk attitude for different investors	10	x	x	
2	Apply classical portfolio theory to equity investments, and integrate the investment with risk attitude	40	x	x	x
3	Evaluate risk and return using standard asset pricing models, form optimal portfolio	30	x	x	x
4	Analyze bonds and formulate immunization strategy, and discover investment strategy more than merely equity investment	20	x	x	x

#### A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

#### A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

#### A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

**Teaching and Learning Activities (TLAs)**

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	<ul style="list-style-type: none"> <li>- Excel illustration in portfolio optimization, with data retrieved from web resources, such as “Yahoo!.com” . Students will also learn to read the stock quotes.</li> <li>- Before a theory is introduced, the assumptions and proving process will be explained and illustrated in details. This will help students understand the theories and discover the underlying rationale.</li> <li>- In-class games will be conducted (e.g. St Petersburg Paradox) to provoke students’ interests and help them understand some of the theories.</li> <li>- Through the lectures, students will acquire the necessary tools to trading and investing, based on their understanding of the investment theories and application of the valuation models.</li> </ul>	2, 3  3 hours lecture each week
2	In-class exercises and in-class quiz	Exercises on each topic will be distributed to students as homework and the solutions will be illustrated in class. Students are also required to take an in-class quiz.	1, 2, 3, 4

3	<p>Group Project (1)</p> <p>Private banking wealth manager</p>	<p>Students are required to act as wealth manager to manage the wealth of high-end customers, form portfolios and calculate the risks and returns. Students are also required to interpret the results and rationale of their advice to the clients. Students could form a group of 4-5 and act as a team of wealth manager.</p> <p>(1) design questionnaire to analyse the client' s risk attitude and their financial planning goal</p> <p>(2) analyse the current situation of client' s financial status and cash flows</p> <p>(3) design an investment portfolio for the client to achieve his/her financial planning goal considering risk attitude.</p>	1, 2, 3, 4	
4	<p>Group project (2)</p> <p>Fund manager</p>	<p>(1) Investment Policy Statement (IPS) for managing a fund: objective, risk and return, fund strategy etc.</p> <p>(2) Equity analysis and fixed-income security analysis will be included and applied to the fund management.</p> <p>(3) The application of Excel will be illustrated in class and students are encouraged to use the software to solve portfolio optimization problems.</p>	1, 2, 3, 4	

**Assessment Tasks / Activities (ATs)**

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Group projects, in-class exercise, in-class quiz, and classroom participation	1, 2, 3, 4	40	

**Continuous Assessment (%)**

40

**Examination (%)**

60

**Examination Duration (Hours)**

2

**Additional Information for ATs**

Students are required to pass both coursework and examination components in order to pass the course.

**Assessment Rubrics (AR)****Assessment Task**

Final Examination

**Criterion**

Demonstrate the ability/ skill needed to discover/ innovate/ create. Demonstrate the accomplishment of discovery/ innovation/creativity.

**Excellent (A+, A, A-)**

Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of the subject of portfolio investment; evidence of extensive knowledge base as outlined in CILOs. Students have demonstrated very strong overall ability to discover and innovate, and showed very strong evidence of accomplishments in discovery.

**Good (B+, B, B-)**

Evidence of knowing how to apply the related concepts outlined in CILOs. Students have demonstrated strong overall ability to discover and innovate, and showed strong evidence of accomplishments in discovery.

**Fair (C+, C, C-)**

Some evidence of knowing how to apply the concepts outlined in CILOs. Students have demonstrated some ability to discover and innovate, and showed satisfactory evidence of accomplishments in discovery.

**Marginal (D)**

Marginal familiarity with the subject of portfolio investment. Students have demonstrated marginal ability to discover and innovate, and showed marginal evidence of accomplishments in discovery.

**Failure (F)**

Little evidence of familiarity with the subject of portfolio; or no show and no excuse in final exam. Students have demonstrated little evidence of ability to discover and innovate, and showed little evidence of accomplishments in discovery.

**Assessment Task**

Group projects, in-class exercise, in-class quiz, and classroom participation

**Criterion**

Demonstrate an attitude of discovery/ innovation/ creativity. Develop the ability/skill needed to discover/innovate/create.

**Excellent (A+, A, A-)**

Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of the subject of portfolio investment; evidence of extensive knowledge base as outlined in CILOs. Students have demonstrated very strong overall ability to discover and innovate, and showed very strong evidence of accomplishments in discovery.

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## Part III Other Information

**Keyword Syllabus**

1. Risk aversion, utility function
2. Random returns, expectation, variance, covariance
3. Portfolio, diversification, investment choice set, efficient frontier, CAL
4. Capital Asset Pricing Model (CAPM), beta, SML, CML
5. Factor models, Arbitrage Pricing Theory (APT)
6. Bond valuation, term structure of interest rate
7. Interest rate risk, duration, convexity, immunization strategy

**Reading List****Compulsory Readings**

Title	
1	Z. Bodie, A. Kane, A.J. Marcus, and J. Ravi, Investment: Asia Global Edition, McGraw-Hill, Latest edition

**Additional Readings**

Title	
1	Articles of finance topics.
2	Lecture notes, newspaper clippings and articles.
3	Websites from: Online Learning Center: <a href="http://highered.mcgraw-hill.com/sites/0072339160/student_view0/">http://highered.mcgraw-hill.com/sites/0072339160/student_view0/</a> and this is under <a href="http://www.mhhe.com/business/finance/bkm/">http://www.mhhe.com/business/finance/bkm/</a>