

*(Issued under Decision No.1380/OD-ĐHKTOD on 15/8/2016 by the University President)*

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Microeconomics 1, Macroeconomics 1, Computer Skills, Econometrics, Monetary and financial theory.

The models for analyzing and evaluating the financial assets mainly refers to the application of some mathematical methods for modeling the process of analysis and valuation of the assets on the financial market. On that basis, it can be directly applied in the security investment advisory, portfolio management and financial market analysis. Moreover, students also empirically practice models with Vietnamese and regional data.

- ✓ The course provides learners with the basic contents of the portfolio theory, the models for analyzing and evaluating the financial assets.
- ✓ The course provides learners with skills of portfolio analysis, analysis of asset pricing models, analytical skills on the experimental model of the financial market of Vietnam and the world.

## 6. COURSE OBJECTIVES

### TENTATIVE SCHEDULE

No.	Topics	Number of teaching periods	Consist of		Note
			Theory	Exercises, discussion, examination	
1	Chapter 1	4	4		Practicing on the computer and group presentation
2	Chapter 2	6	4	2	
3	Chapter 3	10	7	3	
4	Chapter 4	10	6	4	
	<b>Total</b>	<b>30</b>	<b>21</b>	<b>9</b>	

### Chapter 1 – DEFINITION AND BASIC PRINCIPLES IN FINANCIAL ANALYSIS

*This chapter covers following contents:*

- ✓ *Financial market and goods of financial market*
- ✓ *Modeling method in analyzing financial market based on some basic principles*

1.1. Financial market and goods

1.2. Definition and basic principles in analysing and pricing financial assets

1.2.1. Asset, portfolio: return and risk

1.2.2. Principles: no arbitrage, diversification, discount and leverage

References:

- 1) Hoang Dinh Tuan (2010), *The models for analyzing and evaluating the financial assets*, Science & Technics Publishing house
- 2) David Blake (2000), *Financial Market Analysis*, John-Wiley & Sons Ltd.

### Chapter 2 – MODELLING RISKY ACTIVITY

*This chapter covers following contents:*

- *Modeling risky activities of individuals*
- *Modeling agent's choice in uncertain environments.*
- *Modelling and measuring attitudes of investors to risk*

2.1. The risky environment and modeling

2.2. Selecting Model in the risk environment

2.2.1. Set of gambles and the order of preference

2.2.2. Expected utility function, attitudes towards risk and measuring

2.2.3. Utility function, mean-variance expected utility function

2.2.4. Applying the utility function in insurance and investment in risky assets

References:

- 1) Hoang Dinh Tuan (2010), *The models for analysing and evaluating the financial assets*, Science & Technics Publishing house
- 2) David Blake (2000), *Financial Market Analysis*, John-Wiley & Sons Ltd.

## **Chapter 3 – ANALYZING AND MANAGING INVESTMENT PORTFOLIO**

*This chapter covers following contents:*

- ✓ *Mean – Variance Analysis for choosing the optimal portfolio*
- ✓ *Analyzing efficient portfolios*
- ✓ *Simple Index Model (SIM) and Elton – Gruber – Padberg algorithm for finding out efficient portfolios*
- ✓ *The process of adjusting and evaluating the implementing and analysing portfolio.*

3.1. Expectation – Variance analysis method (Markowitz method)

3.1.1. The assumptions and concepts

3.1.2. Portfolio and holding portfolio

3.1.3. Model identifying frontier portfolio and efficient portfolio (cases with and without the risk free asset): assumptions, model, solutions of model, properties, static comparative analysis

3.2. SIM and applications

3.3. Portfolio management

3.3.1. Strategies of portfolio management

3.3.2. Making optimal portfolio

3.3.3. Assessing portfolio implementation

References:

- 1) Hoang Dinh Tuan (2010), *The models for analysing and evaluating the financial assets*, Science & Technics Publishing house
- 2) David Blake (2000), *Financial Market Analysis*, John-Wiley & Sons Ltd.

## **Chapter 4 – CAPITAL ASSET PRICING MODEL (CAPM)**

*This chapter covers following contents:*

- ✓ *The contents related to CAPM in terms of theory and practice of asset pricing.*
- ✓ *Methods of estimating and verifying CAPM.*

4.1. Capital Asset Pricing Model – CAPM

- 4.1.1. Historical role of CAPM
- 4.1.2. CAPM model
- 4.2. Applications of CAPM
  - 4.2.1. Analyzing risk of assets and portfolios
  - 4.2.2. Computing  $\alpha$  coefficient of assets and portfolios
  - 4.2.3. Asset pricing
- 4.3. Estimating and testing CAPM
  - 4.3.1. Estimating parameters of CAPM
  - 4.3.2. Testing CAPM
  - 4.3.3. Process of estimating and testing CAPM

**References:**

- 1) Hoang Dinh Tuan (2010), *The models for analysing and evaluating the financial assets*, Science & Technics Publishing house
- 2) David Blake (2000), *Financial Market Analysis*, John-Wiley & Sons Ltd.
- 3) Paul Wilmott (1998), *Derivatives – The Theory and Practice of Financial Engineering*, John-Wiley & Sons Ltd.

**7. REQUIRED TEXTBOOKS & COURSE MATERIALS:**

Hoang Dinh Tuan (2010), *The models for analysing and evaluating the financial assets*, Science & Technics Publishing house

**8. RECOMMENDED TEXTS & OTHER READINGS:**

- 1) David Blake (2000), *Financial Market Analysis*, John-Wiley & Sons Ltd.
- 2) Paul Wilmott (1998), *Derivatives – The Theory and Practice of Financial Engineering*, John-Wiley & Sons Ltd.
- 3) John C. Hull (1997), *Options, Futures and other Derivatives*, Prentice Hall.

**9. ASSESSMENT**

- ✓ Attendance enough hours under Regulation (at least 80% specified number of hours): 10%
- ✓ Discussion and exercises: Lecturer requests.
- ✓ Practices, presentations: 30%.
- ✓ Final exam: 60%.

*Hanoi, 2016*

**HEAD OF DEPARTMENT**

(signed)

**PhD. Hoang Duc Manh**

**PRESIDENT**

(signed)

**Prof.Dr. Tran Tho Dat**