

Academic Year: ( 2023 / 2024 )

Review date: 24-04-2023

Department assigned to the subject: Business Administration Department

Coordinating teacher: SERRANO JIMENEZ, PEDRO JOSE

Type: Compulsory ECTS Credits : 6.0

Year : 2 Semester : 2

**REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)**

- Mathematics for Economics I
- Mathematics for Economics II

**OBJECTIVES**

At the end of the course students should be able to:

- Compute present and future values of cash-flow streams to compute the net present values of different real and financial investments.
- Have a basic knowledge of the functioning of financial markets and of the way in which investment decisions are made.
- Understand the risk-return tradeoff. Understand how diversification affects risk.
- Have a clear understanding of the difference between systematic and diversifiable risk and know how to measure each.
- Understand how interest rates are set and the principles of valuation of fixed income securities.
- Know the basic types of derivatives and understand why and how they are used in risk management.

**DESCRIPTION OF CONTENTS: PROGRAMME**

## Financial Economics

- 1. Introduction to Financial Markets
  - a.Financing investment in the economy
  - b.Financial markets and trading financial assets
- 2. Financial Mathematics
  - a.Introduction: The time value of money
  - b.Simple and compound interest. Equivalent interest rates.
  - c.Present and Future Values.
  - d.Annuities
- 3. Investment Appraisal
  - a.Cash flows
  - b.Determining current and future values
  - c.Net present value of an investment project
  - d.Internal rate of return
  - e.Other valuation techniques
- 4. Risk and Return
  - a.Mathematical representation of a portfolio
  - b.Expected portfolio returns
  - c.Variance and standard deviation
  - d.Finding the minimum variance portfolio
  - e.Graphical representation of expected return and standard deviation of a portfolio
- 5. Portfolio Theory
  - a.Diversification Effect
  - b.Assumptions of the Mean-Variance Analysis
  - c.The Efficient Frontier
  - d.The tangency portfolio

- 6. The Capital Asset Pricing Model (CAPM)
  - a. Relationship between risk and expected return
  - b. The CAPM model
  - c. The CML and The SML
  - d. Portfolio Beta

- 7. Fixed Income Securities
  - a. Valuation of fixed income
  - b. The term structure of Interest Rates
  - c. Forward interest rates
  - d. Default risk
  - e. Risk Management

- 8. Derivatives Products
  - a. Types of derivatives
  - b. Pricing Principles

Reference text books:

- Bodie, Z., Kane, A. and Marcus, A. J. (2017), Investments, McGraw Hill (10th. Edition).
- Brealey R., S. C. Myers and F. Allen (2016), Principles of Corporate Finance, 12th edition, McGraw Hill.

Other useful books:

- Marín, J.M. and G. Rubio (2011), Economía Financiera, Antoni Bosch.
- Essentials of Corporate Finance, 9/e edition, Stephen Ross, Jeffrey Jaffe, and Randolph Westerfield, 2017

#### LEARNING ACTIVITIES AND METHODOLOGY

Learning activities comprise:

- 1.- Theory - Sessions. The instructor of the course teach the basic concepts of the topic. Classnotes are provided to the students.
- 2.- Solution to exercises. The student must solve the test to assess his/her degree of knowledge of the different concepts.
- 3.- Exercises - Sessions. The instructor of these sessions solves the exercise sets provided to the students.

#### ASSESSMENT SYSTEM

Grades will be awarded according to the following criteria

- Homework, problem sets and/or group cases (20%)
- Midterm exam (30%)
- Final exam (50%)

|                                                                             |    |
|-----------------------------------------------------------------------------|----|
| <b>% end-of-term-examination:</b>                                           | 50 |
| <b>% of continuous assessment (assignments, laboratory, practicals...):</b> | 50 |

#### BASIC BIBLIOGRAPHY

- Brealey, Myers and Allen Principles of Corporate Finance 12/e, McGraw-Hill,, 2017
- Zvi Bodie, Alex Kane, and Alan J. Marcus Essentials of Investments, 10th Edition, McGraw-Hill Irwin, 2017

#### ADDITIONAL BIBLIOGRAPHY

- Mark Grinblatt and Sheridan Titman Financial Markets and Corporate Strategy, McGraw-Hill, 2011
- Ross, Westerfield and Jordan Essentials of Corporate Finance, 8/e, McGraw-Hill-Irwin, 2013