Economy and Finance II

Academic Year: (2022 / 2023) **Review date: 05-05-2022**

Department assigned to the subject: Business Administration Department

Coordinating teacher: BALBAS DE LA CORTE, ALEJANDRO

Type: Electives ECTS Credits : 6.0

Year : 1 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

There are no requirements for students with appropriate grade (Economics, Finance, Science, Engineering).

OBJECTIVES

1) Capital markets equilibrium and its implications on pricing, hedging and market efficiency.

2) Pricing and hedging derivative securities.

3) Fixed income markets, interest rates and credit spreads.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Forward and Future Contracts
Forward and Future Contracts. Spot and Future Prices. Arbitrage. Currencies and Dividends. Using Futures in Practice. Overcoming Market Imperfections.
2. Introduction to Option Markets
Options (Calls and Puts, European and American Style), Premium (upper and lower bounds), Put-Call Parity, Strategies Involving Options.
3. The Black-Scholes Model
General Assumptions. Delta-Strategies. The Black-Scholes Formula. Consequences. Applications in Practice.
4. The Black-Scholes Model (second part)
Incorporating Dividends. Future Options. Pricing and Hedging more Complex Derivatives.
5. Term Structure of Interest Rates
Pricing Fixed Income Securities. Spot Rates. Forward Rates. Understanding the TSIR (pure expectations, segmentation, liquidity preference).
6. Estimating the TSIR
Practical methods to estimate the TSIR (McCulloch, Nelson-Siejel and Svensson methods).
Credit risk, credit spread, credit spread estimations
7. Hedging the Interest Rate Risk
Interest Rate Risk. Additive and non-Additive Shifts. Duration. Convexity. Immunization Theory.
8. More about Market Efficiency and Portfolio Choice
Market efficiency, Markowitz model, efficient portfolios, the role of the riskless asset.
9. APT models
Factors, regression models, betas, idiosyncratic and systematic risk. Hedging strategies, practical applications.
10. Capital Asset Pricing Model (CAPM)
The market portfolio as a unique factor, idiosyncratic and systematic risk. consequences on portfolio theory, market equilibrium, practical applications empirical evidence.

LEARNING ACTIVITIES AND METHODOLOGY

Methodology:
1) Theoretical lectures
2) Practical lessons
3) Exercises
4) Reading and summarizing academic papers

Furthermore, there will be an adequate timetable so as to allow students to discuss with the professor (three hours a week).

ASSESSMENT SYSTEM

1) Final exam, 60%
2) Practical exercises, 20%
3) Projects, 20%

% end-of-term-examination:	60
% of continuous assessment (assigments, laboratory, practicals…):	40

BASIC BIBLIOGRAPHY

- Brealey, R., S. C. Myers and F. Allen Principles of Corporate Finance, McGraw Hill.
- Fabozzi, F. Bond Markets, Analysis and Strategies, Prentice-Hall International, Inc.
- Hull, J. Options, Futures and other Derivatives, Prentice-Hall International, Inc.