

Academic Year: ( 2019 / 2020 )

Review date: 13/02/2020 23:41:14

Department assigned to the subject:

Coordinating teacher: TAPIA TORRES, MIGUEL ANGEL

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

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

Target Audience: This course is adequate for any student in the master (she could be an Economics, Engineering, Mathematicians, Physics or from Business Administration bachelor).

Course Language: This course is totally taught in English.

No previous courses are necessary.

**OBJECTIVES****GENERAL COMPETENCES:**

Students will achieve the ability to answer new problems, using a large amount of information. They will learn how to work in unstable situations, being part of a team or individually. They will also promote their ability of leadership.

**SPECIFIC COMPETENCES:**

The aim of this course is to understand the main elements that make up a financial system, including the description of its institutions (European Central Bank), its markets (both monetary and capital) and its various types of assets and instruments.

Students will learn and understand:

1. The basic structure, characteristics and functions of a financial system,
2. Financial instruments and transactions, including stocks bonds, deposits, derivatives, and mutual funds.
3. The role of law and regulation of the financial system and how it affects the normal functioning of all institutions, intermediaries and markets.
4. Interpret financial markets in terms of its architecture.
5. The role of active and passive management

In this way the students will understand the current state of financial systems including the role of financial institutions, central banks and the various regulators.

**COURSE DESCRIPTION**

The content of the program is divided into 8 sessions that cover the main aspects of the financial system. After an introductory track to financial markets the section deals with liquidity aspects. Also we will focus our attention to other financial markets such as Stock Exchanges, Derivatives, Fixed Income and interbank market. When it becomes necessary for each of the markets discussed above products traded and the form and procedure in which these products are created and then traded. Finally, we examine the role of European Central Bank, its monetary policy and regulatory bodies.

**FACULTY:**

-Mikel Tapia (Full Professor, Uc3m)

-Jorge Yzaguirre (BME, PhD)

**DESCRIPTION OF CONTENTS: PROGRAMME****Program**

Session 1&2: Financial Markets and Instruments: an Introduction.

1. Introduction and structure: Instruments and Markets

2. How do financial markets work?
3. Transaction cost
4. Types of Markets
5. Competition of Financial Markets
6. MiFID
7. Ultra High Frequency Traders

#### Learning goals:

1. To know the definitions relating to the financial system
2. To understand the functioning of financial markets and its role
3. Learn some concepts: Different Market Types, Continuous vs Non continuous, electronic vs non-electronic.

#### Session 3&4: Liquidity

1. Liquidity: basic concepts
2. Some results: intraday and interday regularities
3. The Liquidity Function

#### Learning Objective:

1. To understand liquidity and its importance.
2. To learn different concepts: Spreads, implicit cost, Depth
3. To learn how to measure liquidity and why it is important.

#### Session 5&6: Fixed income and ECB

1. Fixed income
  - 1.1. Public Debt Market
  - 1.2. Interbank Market
  - 1.3. Corporate Debt Market
2. ECB
  - 2.1. The Monetary Policy
  - 2.2. Quantitative easing (QE)

#### Learning Goals

1. To know the instruments and markets of Public Debt Market (Bond Market)
2. To know the instruments and markets of Interbank Market
3. To learn main role of ECB and stylized facts of Monetary Policy.
4. To understand the importance of Monetary Policy

#### Session 7&8: Derivatives and Mutual Funds

1. Derivatives
  - 1.1. Introduction
  - 1.2. Options
  - 1.3. Futures
  - 1.4. The Market
2. Investment companies and Mutual Funds
  - 2.1. Introduction
  - 2.2. Advantages and drawbacks of mutual funds to individual investments
  - 2.3. Participants
  - 2.4. Management Styles
  - 2.5. Mutual funds

#### Learning Goals

1. To know the instruments and markets of Derivatives
2. Some insights on Mutual fund industry

#### Session 9&10

Students will present the work done on specific markets.

#### Session 11: Electronic Markets and indexing.

1. Introduction to indexing
2. Active and passive portfolio management
3. Cash and futures index arbitrage

#### Learning goals:

1. To understand the general rationale of indexing
2. Consequences of indexing practice in cash and derivative markets
3. To learn principles of active and passive portfolio management

4. Understand cash and futures index arbitrage

#### Session 12: Exchange Traded Funds

1. Mutual Funds versus Exchange Traded Funds
2. Role of ETF
3. Interactions between cash, futures and ETFs

#### Learning goals

1. To understand the differences between Mutual Funds and Exchange Traded Funds
2. History, present and future of this product
3. Interactions between cash, futures and ETFs

### LEARNING ACTIVITIES AND METHODOLOGY

Students will work in teams, learning to collaborate and organize the information. The professor will present the main theoretical concepts before the students do the assignments. All the session have a practical issue to solve by the teams.

#### 1. Assignment 1

Each team should prepare a power point presentation (ppt) of a financial market. In the presentation, the students should provide useful information about the type of market, trading hours, type of orders, last years volume or liquidity, etc.

#### 2. Assignment 2

Using the data included in San\_Min.txt that contains information about the first five levels of the limit order book of Santander on 8th august of 2011. Each team should calculate some liquidity variables and compare their results with the ones that the professor explains in class.

#### 3. Assignment 3.

Using the data included in March11 that contains information about volume in shares, number of messages, Quoted spread and dollar depth of 40 stocks listed in Nasdaq. Each team should create some portfolios and compare the results with the ones that the professor explains in class

#### 4. Presentation of Assignment 1

Presentation will evaluate team ability to communicate the main idea of the presentation and to link all concepts and ideas, their ability to answer properly the questions done by the professor and the rest of the class after/during presentation, team members ability to maintain eye contact with audience, seldom returning to notes and finally team ability to identify and accurately explain/use the relevant key concepts.

### ASSESSMENT SYSTEM

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

Assessment (continued) is based on the following criteria:

1. Assignment 1: 10%
2. Assignment 2: 10%
3. Assignment 3: 10%
4. Presentation of Assignment 1: 20%. Presentation will evaluate  
Team ability to communicate the main idea of the presentation and to link all concepts and ideas, their ability to answer properly the questions done by the the professor and the rest of the class after/during presentation, team members ability to maintain eye contact with audience, seldom returning to notes and finally team ability to identify and accurately explain/use the relevant key concepts.
5. Exam: 50%. Which assessed the knowledge acquired by students. Exam minimum grade to pass the subject is 4 over 10. The exam will be a closed book one with calculator.

Students that do not meet the minimum passing grade should retake the subject. If the resit is taken, the above grade criteria also apply

### BASIC BIBLIOGRAPHY

- Larry Harris Trading and Exchanges: Market Microstructure for Practitioners, Oxford University Press, 2003

- Stephen Valdez, Philip Molyneux An Introduction to Global Financial Markets, Palgrave Macmillan. ISBN 9781137007520, 2012