Dynamic financial analysis I

Academic Year: (2019 / 2020)   **Review date: 28-04-2020**

Department assigned to the subject: Business Administration Department

Coordinating teacher: SERRANO JIMENEZ, PEDRO JOSE

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 1

OBJECTIVES

The aim of this course is to introduce the theoretical and conceptual basis associated with asset pricing.
To achieve this fundamental objective, the student, at the end of the course must have reached a series of knowledge, skills and attitudes detailed below:

Of knowledge:
- To know the financial valuation criteria
- Know the different types of financial operations
- Know and apply the techniques for generating valuation scenarios in a dynamic context.
- Know the modifications that financial contracts may undergo and assess the technical consequences of such modifications.
Of skill:
- To reach the capacity to analyse financial products.
- Calculate market valuations
- Controlling and understanding risk

Of attitude:
- Capacity for analysis and synthesis.
- Ability to organize and plan work.
- Ability to solve complex problems of habitual actuarial practice.
- Work in a team.
- Enhance the ability to express oneself both orally and in writing.
- Ability to communicate with experts in other areas.
- Ethical commitment.

DESCRIPTION OF CONTENTS: PROGRAMME

Part 1: The tools

01x01. Introduction to Financial Economics.
- What is Finance?
- Financial Institutions. Classification.
- Elements of the market (operations / agents / etc.).
- Arbitration.

01x02. Financial mathematics.
- The time value of money.
- Interest rates.
- Present and future value.
- Annuities.
- Exercises.

01x03. Investment criteria.
- Net Present Value (NPV)
- Internal Rate of Return (IRR)
- Payback rule.

01x04. Financial products.
- Shares.
- Valuation of shares.
- Bonds

- Valuation of bonds.
- The terml structure of interest rates.
- Interest rate risk and duration. Credit risk.

Part 2: Portfolio management (3 sessions)

02x01. The model of Markowitz.

02x02. Implementation of the Markowitz model.

02x03. Management of fixed income portfolios.

Part 3: Asset valuation.

03x01. Valuation by equilibrium models.
- The fundamental theorem of asset pricing.
- The CAPM

03x02. Implementation of the CAPM model
- Regressions of Fame and Macbeth

03x03. Other market factors. Investing factor.
- The momentum factor.
- The value factor.
- Fame and French (1993).

03x04. Valuation in the absence of arbitration. Context of certainty.
- Fixed income valuation.
- The basic bond.
- Examples.

03x05. Valuation in the absence of arbitration. Context of uncertainty.
- Derivatives pricing
- Arrow-Debreu assets.

03x06. Implementation of derivative pricing.
- The binomial model.

LEARNING ACTIVITIES AND METHODOLOGY

The development of the subject may vary given that it is part of a teaching innovation project

The teaching methodology of the subject Financial Analysis I will be entry:
- Master classes: in which the fundamental theoretical and practical concepts that the student must acquire will be developed. To this end, a collection of notes and exercises will be prepared, which the student will have prior to classes. It will also provide the bibliography reference, complementary and additional to the aspects developed in class that will be available to the student to delve deeper into those topics in which they are more interested.
- Resolution of exercises and assumptions applied by the teacher, encouraging the active participation of students in the resolution of the same (both individually and as a team). These exercises will be solved during the master classes.
- Throughout the course, computer rooms will be used to introduce the student to the computer programming tools applied to insurance.
- Resolution by the student of exercises proposed by the teacher that will be delivered throughout the course and that will serve to self-assess their knowledge and acquire the necessary skills.

The 6 ECTS credits would correspond to approximately 4 theoretical credits and 2 practical credits.

ASSESSMENT SYSTEM

The evaluation is based on the following criteria:
1.- Resolution of theoretical or practical exercises and participation in class (40%)
2.- Midterm examinations (60%). It consists of three midterm exams during the course on the content explained in class. The grade of this part will be the average of the three tests.

IMPORTANT: In order to pass the course, the student must obtain a grade of 5.0 (or more) out of 10.0 in the average of the three midterm exams. If the student does not pass this 5.0 average, the course will be considered as failed, and the exercise part will not be evaluated.

% end-of-term-examination: 60

% of continuous assessment (assigments, laboratory, practicals…):   40

BASIC BIBLIOGRAPHY
   - Marín José M., Gonzalo Rubio. Economía Financiera., Antoni Bosch (1ª Edición), 2011