Financial Economics

Academic Year: (2019 / 2020)   Review date: 29-04-2020

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)
   Financial Mathematics

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
    1. Introduction to Financial Mathematics
   a. Time Value of Money
   b. Future and Present Value
   c. The frequency of compounding. Effective Annual Interest Rate (EAR)
   2. Annuities and Perpetuities
   a. Concept of annuity
   b. Ordinary Annuity, Annuity Due
   c. Perpetuity
   3. Loan Amortization
   a. French loan
   b. American loan
   c. Constant principal paid off loan
   4. Discounted cash flow valuation
   a. Payback period
   b. Net Present Value (NPV)
   c. Internal Rate of return (IRR)
   5. Interest and Bond Valuation
   a. Yield curves and forward rates
   b. Bond Valuation and Bond Yields
   c. Annual and Semi-Annual Coupon Bonds
   6. Stocks and their Valuation
   a. Common Stocks and Preferred Stocks
   b. Constant Growth Stocks
   c. Valuing Stocks Expected to Grow at a Non-Constant Rate
   7. Risk and Return
   a. Mathematical representation of a portfolio
   b. The Graphical Relation between Risk and Rates of Return
   c. Portfolio theory and asset allocation.
   8. The Capital Asset Pricing Model (CAPM)
   a. The CAPM
   b. The CML and the SML
   c. Portfolio beta
   9. Financial Derivatives
   a. The main types of derivatives

b. Valuing forward contracts. The futures price.
c. Valuing Options. Binomial model

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 follwing criteria
-Three exams (two exercise exams + one midterm) in the classes. The average of the two best marks will be taken into account for computing the exercise part.
-The weight of the exercise part in the final mark is 40%.
-The minimun grade for passing the final exam is 4.0 out of 10.0.

Relevant information for exchange students: The date of the final exam is official and fixed by the University. This date will not be modified under any circumstance to accomodate any special situation of the student (return flights, summer internships, etc.).

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

BASIC BIBLIOGRAPHY

 - José M. Marín; Gonzalo Rubio Economía Financiera, Antoni Bosch, 2011

 - Mark Grinblatt; Sheridan Titman Financial Markets and Corporate Strategy, McGraw-Hill Education ¿ Europe, 2011

ADDITIONAL BIBLIOGRAPHY

 - Bodie Zvi, Kane Alex, Marcus Alan Essentials of Investments, 6th Edition, McGraw Hill, 2005

 - Brealey R., S. C. Myers and F. Allen Principles of Corporate Finance, 8th Edition, McGraw Hill, 2006