

Academic Year: (2023 / 2024)

Review date: 07-02-2024

Department assigned to the subject: Business Administration Department

Coordinating teacher: PEÑA SANCHEZ DE RIVERA, JUAN IGNACIO

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Mathematics (Linear Algebra and Calculus), Statistics, Econometrics I and II, Microeconomics III, Financial Economics, Corporate Finance, Financial Systems.

Before attending the practice sessions, students must complete the MATLAB Onramp (<https://MATLABacademy.mathworks.com/>) course. Please email the MATLAB Onramp Course Completion Certificate to ypenya@eco.uc3m.es prior to the first practice session.

OBJECTIVES

This course presents the main tools for designing and evaluating investment strategies. First, we review the main asset classes and investment instruments. After describing the main asset classes, investment instruments, and portfolio performance measures, we focus on the critical aspects of sustainable financial investing. Next, we review the elements of investment strategies, and the course ends with some suggestions for personal portfolio choice. All the material and the readings are in English. Practice sessions by groups are based on MATLAB Live Scripts. The students must present a final individual project developed using MATLAB.

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DESCRIPTION OF CONTENTS: PROGRAMME**PROGRAM:****Chapter 1. Introduction**

What is this course about?

Is this course for you?

MATLAB

A.I. Policy

Grading

Financial asset classes

Investment Instruments

Standardized Asset Description

Appendix: Books and Movies

Chapter 2. Asset Classes, Investments Instruments, and Portfolio Performance

Asset Classes

Historical Performance

Risk Factors

Investment Instruments

CFD

Investment funds

ETF

Assessing Portfolio Performance

Chapter 3. The Elements of the Investment Strategy

Passive Investment
Active Investment
Asset Allocation : Strategic, Tactical, Global
Security Selection
Market Timing

Chapter 4. Sustainable Finance

Why is sustainability important?
Traditional and sustainable finance
Integrated Value Creation
Climate Risk and Asset Pricing
ESG factors
ESG Investment Strategies
Green Financial products
Carbon markets

Chapter 5. Personal portfolio choice

Preliminaries
Risk aversion and prudence
Instruments
Insurance
Asset classes
Life-cycle portfolio choice

LEARNING ACTIVITIES AND METHODOLOGY

Methodology:

- (1) Theory.
- (2) Cases
- (3) Computer simulations.
- (4) Exercises
- (5) Class discussion.

ASSESSMENT SYSTEM

GRADING:

- ¿ Groups (maximum four persons)
- ¿ Group Practice session (1-10) PDF reports : 10 x 4 = 40 points
- ¿ Individual Project: 60 points.

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|---|-----|
| % end-of-term-examination: | 0 |
| % of continuous assessment (assignments, laboratory, practicals...): | 100 |

BASIC BIBLIOGRAPHY

- - COCHRANE, J.H. Asset Pricing, Princeton University Press. , 2005
- - DIMSON, E., P. MARSH, and M. STAUNTON Triumph of the Optimists: 101 Years of Global Investment Returns, Princeton University Press, 2002
- - SHEFRIN, H. Beyond Greed and Fear: Understanding Behavioral Finance, Oxford University Press. , 2002
- A. Ilmanen Expected returns, Wiley, 2011
- CAMPBELL, J. y VICEIRA, Strategic Asset Allocation, Oxford University Press, . 2002.

ADDITIONAL BIBLIOGRAPHY

- H. Minsky Stabilizing an unstable economy, McGraw Hill, 2008
- Monnery, N. Safe as Houses?. A Historical Analysis of Property Prices. ., London Publishing., 2011

