

61428 - Quantitative Finance

Syllabus Information

Academic Year: 2019/20

Subject: 61428 - Quantitative Finance

Faculty / School: 109 -

Degree: 526 - Master's in Accounting and Finance

ECTS: 4.0

Year: 1

Semester: Annual

Subject Type: Optional

Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The learning process designed for the present course is based on the following issues:

The course will be developed through theoretical and practical sessions. Due to the course instrumental nature, the sessions will be applied-focused. The different sessions are committed with students applying in practice the acquired concepts and techniques, thus following the *learning-by-doing* principle. In this way, the appropriate methods and contents related with the course objectives will be provided to the students in a first step. At the same time, a specific practical case will be explained, resolved and discussed. In a second step, the student will apply the theoretical concepts and methodological approaches previously introduced to analyze one or more case-studies proposed by the professor.

Additionally, students will be able to assist, even individually or in reduced groups, to several personal tutor-oriented sessions.

4.2.Learning tasks

Instruments provided to students to allow them achieving the expected skills and abilities are as follows:

- Theoretical and practical-oriented sessions.

- Practical sessions in which the methods studied will be applied to a real world-problem (i.e., replication of specific examples).
- Specialized workshops focused on innovative financial methods research.
- The use of Information and Communications Technologies (ICTs) as a learning tool. Specifically, statistical modelling software will be used in the different sessions.

4.3.Syllabus

1) Panel data

- 1.1) Technical description
- 1.2) Specification and estimation of panel data models
- 1.3) Inference in panel data models

2) Time Series

- 2.1) Univariate analysis
- 2.2) Multivariate analysis

3) Other quantitative methods in Finance

4.4.Course planning and calendar

The present course will comprise on-site and work presentation sessions.

The on-site sessions' schedule will be publicly available at the webpage of the Economics and Business Faculty of the University of Zaragoza. Specific dates in which the students will be required to present the practical works and further activities will be appropriately communicated by the professor.

4.5.Bibliography and recommended resources

- Greene, William H. Análisis econométrico / William H. Greene . - 3ª ed., reimp. Madrid [etc.] : Prentice-Hall, 2008
- Aznar Grasa, Antonio. Métodos de predicción en economía. Vol. 2, Análisis de series temporales / Antonio Aznar y Francisco Javier Trívez . - [1a. ed.] Barcelona : Ariel, 1993
- Peña Sánchez de Rivera, Daniel. Análisis de series temporales / Daniel Peña Madrid : Alianza, D.L. 2010
- Trívez Bielsa, Francisco Javier. Introducción a la econometría / Francisco Javier Trívez Bielsa. Madrid : Pirámide, D.L. 2010
- Wooldridge, Jeffrey M. Introducción a la econometría : un enfoque moderno / Jeffrey M. Wooldridge ; traducción, Arielle Beyaert Stevens... [et al.] ; revisión técnica, Arielle Beyaert Stevens . - 2ª ed., 3ª reimp. [Madrid] : Paraninfo, cop. 2008
- Stock, James H. Introducción a la econometría / James H. Stock, Mark W. Watson ; traducción, María Arrazola Vacas, Leticia Rodas Alfaya ; traducción, coordinación de la traducción y revisión técnica, Raúl Sánchez Larrión . - 3ª ed. Madrid : Pearson, D.L. 2012