

Academic Year/course: 2022/23

61428 - Quantitative Finance

Syllabus Information

Academic Year: 2022/23

Subject: 61428 - Quantitative Finance

Faculty / School: 109 - Facultad de Economía y Empresa

Degree: 526 - Master's in Accounting and Finance

ECTS: 4.0

Year: 1

Semester: Annual

Subject Type: Optional

Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

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's 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 lecturer.

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

In case not all the lessons could be offered in a room at the Faculty, or not all the students could receive them in person, an online system would be provided.

4.2. Learning tasks

Students will be provided with the instruments to achieve the following skills and abilities:

- Theory 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).
- Specialised 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.

If necessary for health reasons, face-to-face classes may be taught in semi-virtual modality or online.

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 lecturer.

4.5. Bibliography and recommended resources

Resources have been validated on the the Library website.