

Academic Year/course: 2022/23

27548 - Financial Engineering

Syllabus Information

Academic Year: 2022/23

Subject: 27548 - Financial Engineering

Faculty / School: 109 - Facultad de Economía y Empresa

Degree: 449 - Degree in Finance and Accounting

ECTS: 6.0

Year: 4

Semester: Second semester

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 methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures and practice sessions. Due to the operative content of the course, practical examples will be introduced in the theoretical lectures with analyses close to the real markets. Lectures are expected to be participative.

Practical lectures will be developed in a computer framework including real cases worked and solved by the students under the supervision of the teacher.

Complementary voluntary activities will be proposed consisting in group or individual analyses.

4.2. Learning tasks

The course includes the following learning tasks (150 hours, 6 ECTS credits):

- Participative lectures (30 hours)
- Practice sessions to solve real cases (30 hours)
- Personal work (face-to-face or online activities, 90 hours) including
- Individual written exams
- Individual tutorial activities
- Official exams: see evaluation section
- Voluntary works to solve complementary problems related to practical sessions? activities

The teaching delivery methodology is expected to pivot around face-to-face classes. However, if necessary for health reasons, face-to-face classes may be taught online.

4.3. Syllabus

The course will address the following topics:

- Topic 1. HEDGING IN EQUITY INCOME INVESTMENTS
 - Hedging with futures and options of share investments
 - Hedging with futures and options of indexed portfolios. Hedging Ratio.
- Topic 2. SENSITIVITY OF OPTION VALUATION
 - The importance of the strike
 - Sensitivity facing underlying price variations
 - Sensitivity facing volatility variations
 - The passing of time effect
 - Other features to be considered
- Topic 3. COMBINED INVESTMENTS WITH OPTIONS
- Topic 4. SENSITIVITY OF COMBINED INVESTMENTS
- Topic 5. MANAGED INVESTMENT *OF STRUCTURE PRODUCTS*

4.4. Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Faculty of Economics and Business website (<https://econz.unizar.es/>)