

**COURSE DATA****DATA SUBJECT**

Code: 43780
Name: Risks, insurance techniques and professional practice
Cycle: Master's Degree
ECTS Credits: 3
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2171 - Master's Degree in Actuarial and Financial Sciences	Facultat d'Economia	1	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2171 - Master's Degree in Actuarial and Financial Sciences	Finance and introduction to insurance	COMPULSORY

COORDINATION

MUÑOZ MURGUI FRANCISCO

SUMMARY

- Essential elements of risk.
- Treatment and approach to risk
- Risk management standards: the risk map in the company
- Risk in the insurance process. The price of insurance
- Actuarial practice: reports, technical bases, and protocols of action

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS**COMPETENCES / LEARNING OUTCOMES**



2171 - Master's Degree in Actuarial and Financial Sciences

Conocer el código de conducta del Actuario así como las normas más relevantes de la práctica profesional.

Saber tomar decisiones relacionadas con los riesgos evaluables económicamente.

Ser capaces de aplicar los criterios y principios de planificación y control actuarial, necesarios para el correcto funcionamiento de las operaciones que, en cada momento, ofrezcan las entidades de seguros, financieras o cualesquiera otras que impliquen transferencia y cobertura de riesgos.

Ser capaces de construir modelos adecuados al entorno económico empresarial a partir de las posibilidades que ofrecen las modernas tecnologías de la información y de la computación.

Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.

Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.

Students should demonstrate self-directed learning skills for continued academic growth.

DESCRIPTION OF CONTENTS

1. Approach to the concept of risk and its treatment

1. Nature and definitions of risk
2. Uncertainty and risk. Distinction between risk, hazard, and chance
3. The degree of risk: Probability and risk
4. The burden or cost of risk
5. The need for risk management: Treatment methods
6. General classification of risks

2. Risk management standards: the risk map in the company



1. Comprehensive risk management: a necessity for business strategy
2. Risk management standards: COSO-ERM, FERMA, ISO standards
3. Stages of risk management
4. Identification and description of risks: The company's risk chart
5. Risk assessment: frequency and severity. Expected value
6. Self-insurance: captive companies
7. Practical applications

3. Risk in the insurance process

1. Basic principles of insurance
2. Types of insurance according to the type of risk
3. Segmentation, selection, and monitoring of insurable risks
4. The price of insurance: technical principles. Technical bases
5. The premium as a market price
6. The surcharge of the Insurance Compensation Consortium and other external concepts to the tariff premium: the receipt
7. Exercises in spreadsheets

4. The Insurance Sector in Spain

1. Regulatory bodies and sector reports
2. Main figures and rankings of products and companies
3. Automobile insurance
4. Health insurance
5. Multi-risk home and business insurance
6. Life and pension insurance
7. Other relevant types
8. Catastrophic risks

5. Actuarial practice

1. The professional status of the actuary
2. Reports, technical bases, and protocols of action
3. The actuarial function in Solvency II
4. National and international associations
5. Practical cases: submission and personal presentation

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	15,00



Classroom practices	15,00
Total hours	30,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	5,00
Individual or group project	15,00
Independent study and work	25,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	45,00

TEACHING METHODOLOGY

During the course, the program content will be covered by alternating theoretical and practical components. In general, theoretical classes will be delivered using the lecture method, in which the instructor will detail the fundamental aspects of each topic and guide the study through the relevant bibliography, which students should consult to complete and deepen their understanding of the subject.

Practical classes will involve considering applied questions and exercises that have been previously introduced in the theoretical classes. Students are expected to participate actively in these activities by discussing solutions and using appropriate computer techniques for their resolution.

In addition to these in-person activities, students will be required to engage in other activities aimed at autonomous learning, such as individual study, preparation for assessment activities, or the completion of individual or group assignments. For the successful completion of these activities, tutoring is a particularly important teaching resource, as it allows the instructor to monitor the group's progress and provides students with personalized guidance in their training program. Consequently, the use of this teaching resource is recommended and encouraged throughout the course.

The virtual classroom, <https://aulavirtual.uv.es/>, facilitates the implementation of these methodologies, as it contains all the teaching materials and enables smooth communication between instructor and student.

EVALUATION

Assessment will be based on:



- A written exam that will include both theoretical questions and problems or exercises.
- Continuous assessment based on:
 - Attendance and participation in classroom activities.
 - The completion and public presentation of a team project on a topic related to the insurance sector and actuarial practice.

The written exam will account for 50% of the final grade, and continuous assessment will make up the remaining 50%.

In any case, a minimum grade of 5 out of 10 is required to pass the course, and a minimum of 5 out of 10 must also be obtained in the written exam.

To be assessed, activities and assignments must be submitted on the date and in the manner specified for each.

In the second exam session, the same assessment criteria as in the first session will be applied, except for continuous assessment activities, which cannot be retaken.

REFERENCES

WEB REFERENCES:

www.actuarios.org

www.actuaries.org

www.conorseguros.es

www.dgsfp.mineco.es

www.fundacionmapfre.org

www.icea.es

www.inese.es

www.unespa.es

www.institutosantalucia.es



Asmussen, S.; Steffensen, M. (2020): Risk and Insurance: A Graduate Text [electronic resource] Springer International Publishing