COURSE DATA

DATA SUBJECT

Code: 43788
Name: Life insurance
Cycle: Master's Degree
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2171 - Master's Degree in Actuarial and Financial Sciences	Facultat d'Economia	2	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2171 - Master's Degree in Actuarial and Financial Sciences	Life insurance, health insurance and pensions	COMPULSORY

COORDINATION

DEVESA CARPIO JOSE ENRIQUE

SUMMARY

The subject "Life Insurance" is located in the first semester of the second course and is taken after having had a first contact with the insurance field during the first course and having already addressed the study of one of its bigs areas, the "Nonlife Insurance".

In this way, when the mathematical and statistical foundations are reached, and the general context is known, one is able to approach one of the specific areas of the Master: Life Insurance.

Although students already have certain knowledge of insurance for the first course of the master's degree, the field of life insurance may find it practically unknown to them.

The subject of "Life Insurance" has its natural complement in two other subjects: "Health and long-term care benefits and insurance" and "Pension plans and systems", since there are numerous links between them, especially from "Insurance Life" towards the other two, because it is in this matter where the basic actuarial operations that are used in the rest are analyzed.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

To make a suitable learning contents of this module the student should know the basic contents of Financial Economics and Introduction to Risk and have skills in using Excel Spreadsheet and others computer modeling programs.

COMPETENCES / LEARNING OUTCOMES

2171 - Master's Degree in Actuarial and Financial Sciences

Comprender y ser capaces de desarrollar las técnicas matemáticas y estadísticas que resultan relevantes para el trabajo actuarial: modelos de supervivencia, siniestralidad, tarificación, previsión y solvencia.

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

Saber realizar una gestión integral del riesgo y alcanzar los conocimientos suficientes para dar respuesta a los riesgos actuales y a los que puedan surgir resultado del cambiante entorno económico, financiero y social, con vistas a dirigir y gestionar todo tipo de entidades financieras y aseguradoras.

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.

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 communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.

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

DESCRIPTION OF CONTENTS

1. INSURANCE OPERATIONS

1.1.- Definition of insurance operation.
1.2.- Principle of actuarial equivalence.
1.3.- Reservations.

2. LIFE INSURANCE

2.1.- Characterization.
2.2.- Actuarial factors.
2.3.- Technical bases.

3. ACTUARIAL ANNUITY

3.1.- Constants.
3.2.- Variables.
3.3.- Fractional.
3.4.- Continuous.
3.5.- With variable interest rates.

4. LIFE INSURANCE

4.1.- Deferred Capital.
4.2.- Immediate income.
4.3.- Deferred Income.
4.4.- Pure premium reserves.

5. INSURANCE IN CASE OF DEATH (1).

5.1.- Whole Life.
5.2.- Pure premium reserves.
5.3.- Reserve for recurrence.
5.4.- Risk premium and savings premium.
5.5.- Relationships between insurance and income.

6. INSURANCE IN CASE OF DEATH (2)

6.1.- Temporary.
6.2.- Deferred.
6.3.- Variable in arithmetic progression.
6.4.- Variable in geometric progression.
6.5.- Multi-year temporary.
6.6.- Renewable temporary.
6.7.- Group insurance.

7.1.- Simple mixed.
7.2.- Fixed term.

7. OTHER INSURANCE

7.1.- Simple mixed.
7.3.- Comprehensive.
7.4.- With premium counterinsurance.
7.5.- Loan amortization.

8. INSURANCE PRICE AND RESERVE CALCULATION

8.1.- Formation of the insurance price.
8.2.- Types of premiums: Pure, inventory, Zillmer and commercial.
8.3.- Calculation of the different types of reserves: Pure premium, inventory premium, Zillmer premium and commercial premium.
8.4.- Rescue, reduction and advance on policies.

9. INSURANCE OPERATIONS, INTEREST RATES, SHARING IN PROFITS AND PROFITABILITY.

9.1.- Technical and market interest rate.
9.2.- Sensitivity of provisions to variations in interest rates.
9.3.- Unit-Linked insurance and related modalities.
9.4.- Spanish regulations.
9.5.- Profit sharing: Main types and methods of distribution.
9.5.- Financial-fiscal profitability.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	30,00
Classroom practices	30,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	10,00
Individual or group project	20,00
Independent study and work	30,00
Preparation of lessons	15,00
Preparation for assessment activities	15,00
Resolution of case studies	0,00
Total hours	**90,00**

TEACHING METHODOLOGY

During the course, the contents of the program will be worked on, synchronizing theoretical contents with exercises and practical assumptions, and various tasks will be proposed that the student will have to deliver in the form and date that is detailed throughout the development of the course. For this purpose, all available resources (blackboard, transparencies, cannon, computer, etc.) that are considered most appropriate to the correct achievement of the proposed objectives will be used in each case and according to the needs.
In general, the theoretical part will be taught through the methodology of the participative lecture, in which the teacher will highlight the fundamental aspects of each topic and guide the study through the relevant bibliography, which inexcusably must go to complete and deepen the subject.
The practical classes consist of raising questions and exercises of a character applied to the economic, financial and actuarial field, which the student must resolve by proceeding, where appropriate, to the relevant modeling and discussion of the solution.
The practical classes will be carried out, in some cases with computer support, so that the student can have an updated view of the use of the packages and techniques, increasingly extended in all the areas mentioned.
In the practical classes will solve questions and problems previously raised in the theoretical classes, except in some cases, in which given the practical nature of the subject taught the same only in the practical session.
As far as possible, group tasks will be carried out.
The available teaching material can be accessed from the virtual classroom, http://aulavirtual.uv.es

EVALUATION

The subject will be evaluated according to:

- A written exam, which may consist of theoretical questions as well as problems and/or real cases.

- The activities developed by the student throughout the academic period, such as the preparation of papers, the resolution of exercises or problems, the performance of tests, the presentation of reports, oral presentations, etc.

The written exam will represent 60% of the final grade and the course's continuous evaluation the remaining 40%. In any case, to pass the subject it will be necessary to obtain a minimum grade of 5 out of 10 and the written test must exceed a minimum established.

In order for the proposed activities and tasks to be evaluated, they must be submitted on the date and in the manner stipulated for each of them.

Observations:

- The grades obtained will be maintained with the delivery of tasks and continuous evaluation during the course, in case the subject is not passed in the first call (they are considered non-recoverable, not being able to deliver for this call the tasks not exceeded or not delivered during the course).

- In the second call the same evaluation criteria will be used for the first call.

REFERENCES

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