Life Contingences

Academic Year: (2022 / 2023) **Review date: 10-05-2022**

Department assigned to the subject: Business Administration Department

Coordinating teacher: USABEL RODRIGO, MIGUEL ARTURO

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 1

OBJECTIVES

Learning objectives

The student will be able to perform valuations of the main life insurance contracts along with reserve and premium calculations.

Learning outcomes

a) Understanding the contracts, assurances and annuities, as random variables and the risk involved.
b) Considering insurance contracts as signatures of future cash-flows.
c) Knowledge of the theoretical basis of insurance premiums calculations.
d) Understanding the concept of reserves and the most relevant calculation techniques.
e) Design of multiple contingencies contracts: disability, death, etc.
f) Design of multiple lives policies: widowhood, orphans, etc.
g) Implementation of calculation algorithms in a programming language.

Learning skills

a) Analysis and synthesis
b) Problem solving approach
c) Work team player.
d) Critical reasoning
e) Written and verbal communication

DESCRIPTION OF CONTENTS: PROGRAMME

Syllabus

I. Assurances
a. Random variable interpretation.
b. Main types of contracts
c. Continuous and discrete assurances.
d. Mortality table calculations.
e. Computer-based algorithms and implementations
II. Annuities
a. Random variable interpretation.
b. Future cash-flows study.
c. Main types of contracts.
d. Mortality table calculations.
e. Computer-based algorithms and implementations

III. Premiums and reserves calculation.
a. Actuarial equivalence principles
b. The net future liabilities.
c. Future cash-flow studies.
d. Model with expenses
e. Legal types of premiums and reserves.
f. Computer-based algorithms.
IV. Multiple contingencies contracts
a. Concept of disability
b. Workers¿ compensation packages.
V. Multiple lives assurances
a. Widowhood policies
b. Orphan protection insurance

LEARNING ACTIVITIES AND METHODOLOGY

TEACHING METHODOLOGY

I. THEORETICAL CONTENTS

a. Classroom interactive work.

b. Web based materials and handouts

c. Tutorial work.

d. Recommended international bibliography.

e. Office hours and email interaction.

II. PRACTICE

a. Examples and exercises and previous exams classroom solving.

b. Daily students¿ involvement and presentations.

c. Computer work.

d. Debates and bringing up different standpoints on topics. Critical thinking.

ASSESSMENT SYSTEM

The evaluation system is based on a written exam that will acount for 100% of the grade.

% end-of-term-examination:	100
% of continuous assessment (assigments, laboratory, practicals…):	0