# uc3m Universidad Carlos III de Madrid

## Advanced Topics in Acturial Research

Academic Year: (2017 / 2018) Review date: 26-04-2017

Department assigned to the subject: Business Administration Department

Coordinating teacher: BALBAS DE LA CORTE, ALEJANDRO

Type: Electives ECTS Credits: 5.0

Year: 2 Semester: 2

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Background in Mathematical Analysis, Probability Theory, Economics and Finance

#### **OBJECTIVES**

Research skills in advanced actuarial topics

## **DESCRIPTION OF CONTENTS: PROGRAMME**

- 1) Risk Theory, Risk Measures and Risk Models
- 2) Pensions, longevity and financial products
- 3) Catastrophe Risk
- 4) Gerber-Shiu Function
- 5) Reinsurance
- 6) Dependence
- 7) Credibility

## LEARNING ACTIVITIES AND METHODOLOGY

Lectures, exercises, discussions about research papers

### ASSESSMENT SYSTEM

Exame, 60% Exercises, 20%

Research Papers Analyses, 20%

% end-of-term-examination: 60

% of continuous assessment (assignments, laboratory, practicals...): 40