Statistics and Data Science I

Academic Year: (2023 / 2024) **Review date: 15/07/2023 14:13:53**

Department assigned to the subject: Statistics Department

Coordinating teacher: KAISER REMIRO, REGINA

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Introduction to Programming with R (19151)
Basic Statistics (19152)

OBJECTIVES

- Ability to test hypotheses using data and the most appropriate tools.
- Ability to estimate linear regression models with cross-sectional data, as well as to understand and explain the statistical principles underlying the estimations.
- Ability to interpret the parameters of a linear regression, obtain predictions and evaluate the goodness of fit.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Parametric and non parametric estimation

2. Advanced Inference

3. Introduction to advanced modelization

4. Empirical examples

LEARNING ACTIVITIES AND METHODOLOGY

Training Activities:

- Theoretical-practical classes
- Tutorials
- Group work
- Individual student work
- Partial and final examinations

Teaching Methods:

- Presentations in the professor's lecture room with computer and audiovisual support, in which the main concepts of the subject are developed and a bibliography is provided to complement the students' learning.
- Resolution of practical cases, problems, etc. raised by the professor, either individually or in a group.

ASSESSMENT SYSTEM

% end-of-term-examination/test:	50
% of continuous assessment (assigments, laboratory, practicals…):	50

- Participation in the class (10%)
- Individual or group work done during the course (40%)
- Final exam (50%)

% end-of-term-examination/test:	50
% of continuous assessment (assigments, laboratory, practicals…):	50

In the extraordinary call, the evaluation system will be as follows:
1) Exam: 100%

BASIC BIBLIOGRAPHY

- Agresti, Alan. Statistical Methods for the Social Sciences, Global Edition., Pearson International Content., 2018

- Fogarty, Brian J. Quantitative Social Science Data with R., SAGE publications, 2018

- Privitera, Gregory J. Essential Statistics for the Behavioral Sciences., SAGE Publications, 2017