
Academic Year: (2024 / 2025)

Review date: 02-04-2024

Department assigned to the subject: Statistics Department

Coordinating teacher: NOGALES MARTIN, FRANCISCO JAVIER

Type: Electives ECTS Credits : 3.0

Year : 4 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Linear algebra
Probability and Data Analysis
Introduction to Statistical Modeling

OBJECTIVES

Become familiar with different analytical tools, based on data, to make business decisions

Capacity to develop skills to analyze and find relationships between many variables/features

Know how to evaluate supervised-learning models

Develop skills to classify observations based on probabilistic learning and machine learning tools

Handle the R language for statistical-learning tools

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to the statistical learning
2. Evaluation of learning methods
3. Unsupervised learning
 - 3a. Clustering
 - 3b. Dimension reduction
4. Probabilistic learning
 - 4a. Statistical classification
 - 4b. Regression and prediction
5. Case studies

LEARNING ACTIVITIES AND METHODOLOGY

Theory (3 ECTS), Practice (3 ECTS).

50% lectures with teaching materials available on the Web. The other 50% practical sessions (computer labs).

ASSESSMENT SYSTEM

% end-of-term-examination: 50

% of continuous assessment (assignments, laboratory, practicals...): 50

The assessment will be made by weighting the continuous evaluation (50%) and the final exam (50%), with a minimum grade of 5 points over 10 in each assessment activity (both the continuous evaluation and the final exam).