Statistical Reasoning

Academic Year: (2024 / 2025) **Review date: 01-04-2024**

Department assigned to the subject: Statistics Department

Coordinating teacher: JIMENEZ RECAREDO, RAUL JOSE

Type: Additional training ECTS Credits : 2.0

Year : 0 Semester : 1

OBJECTIVES

Review of main topics in mathematical statistics to address stochastic modeling and data analysis

DESCRIPTION OF CONTENTS: PROGRAMME

Probability spaces.
Independence and conditional probability.
Bayes' rule.
Random variables. Distribution, mass and probability density functions.
Discrete and continuous parametric models.
Multivariate regression.

LEARNING ACTIVITIES AND METHODOLOGY

Teaching presentations accompanied by electronic material, such as digital presentations
e-learning activities
Theoretical-practical lessons, synchronous teaching tutorials
Team work
Individual student work
Home works and

ASSESSMENT SYSTEM

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

Team home work (30%), individual student home work (30%) and midterms (40%).

BASIC BIBLIOGRAPHY

- Jason Brownlee Probability for Machine Learning, Machine Learning Mastery, 2020

- Kevin Patrick Murphy Machine Learning: A Probabilistic Perspective , MIT Press, 2012