COMPETENCES AND SKILLS THAT WILL BE ACQUIRED AND LEARNING RESULTS.

* To know exploratory data analysis.
* To know concepts and properties of probability calculus and random variables.
* To know the estimates construction methods and the estimates properties.
* To understand the concept of confidence interval and its applications.
* To know hypotheses testing, including the notion of p-value.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Exploratory data analysis (EDO)
   1.1 Descriptive measures.
   1.2 Graphics and diagrams

2. Introduction to Probability calculus
   2.1 Bases of Probability theory
   2.2 Random variables.
   2.3 Distributions.
   2.4 Independence and transformations.
   2.5 Expectation.

3. Point estimation and interval estimation.
   3.1 Introduction: Estimation problems.
   3.2 Examples.
   3.3 Properties of estimators.
   3.4 Construction of estimators.

4. Hypothesis tests
   4.1 Introduction: hypothesis, errors and function of power.
   4.2 Wald contrast. Fisher test.
   4.3 p-value
   4.4 Ratio of likelihood test.

ASSESSMENT SYSTEM

Final exam.
Homework: particular analysis of real data (by groups of students)
Midterm exam.

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

BASIC BIBLIOGRAPHY

ADDITIONAL BIBLIOGRAPHY
Francisco.