

## 27648 - Statistical Methods for Market Research

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 27648 - Statistical Methods for Market Research

**Faculty / School:** 109 - Facultad de Economía y Empresa

**Degree:** 450 - Degree in Marketing and Market Research

**ECTS:** 5.0

**Year:** 4

**Semester:** **Subject type:** Optional

**Module:**

### 1. General information

The main objective of this subject is for the student to delve into the use of statistical methods in the field of marketing and market research. More specifically, various sampling methods in finite populations will be analyzed, as well as some supervised learning methods (discriminant analysis, regression with qualitative dependent variables, decision trees) widely used in so-called analytical marketing. The subject will have a preferably practical profile so that the student can analyze, resolve and interpret economic realities with the aim of making decisions with scientific rigor.

These approaches and goals are aligned with the Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 and, more specifically, goals 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all) and 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment, and work). No prerequisites are required to take this year, although it is recommended to have passed Statistics I and II of the first and second year, respectively and Data Analysis and Multivariate Techniques of the third year

### 2. Learning results

- Set-up a sampling study in a finite population
- Perform an analysis of missing data and outliers in a multivariate data set
- Set-up a Discriminant Analysis and analyze its empirical validity
- Set-up a Regression Model with a limited dependent variable and analyze its empirical validity
- Set-up a Decision Tree model and analyze its empirical validity

### 3. Syllabus

UNIT 1: Introduction

UNIT 2: Sampling in finite populations

UNIT 3: Exploratory database analysis

UNIT 4: Discriminant Analysis

UNIT 5: Regression with Qualitative Dependent Variable

UNIT 6: Decision Trees

### 4. Academic activities

Master classes: 15 hours

Practical classes: 30 hours

Personal study: 70 hours

Assesment tests: 10 hours

5 ECTS = 125 hours

The classes are mostly practical. The work method will be individualized, which implies that each student will analyze a specific database, evaluate it, detect possible anomalies in its preparation, and propose the most appropriate model to make inference in the study population.

The teaching methodology is planned to be face-to-face. However, if necessary for health reasons, face-to-face classes may be taught online.

### 5. Assessment system

In the first call there will be two assessment systems:

- Continuous system.

The student will be evaluated by carrying out tasks set by the teacher at the end of each topic in order to analyze the degree of understanding of the concepts taught. The tasks will consist of solving practical questions (in the case of topic 2) and applying the techniques taught to the analysis of some of the databases presented in the subject. Each test will weight 20% of the final grade and a minimum score of 3 points must be obtained in order to be averaged.

To pass the subject you must obtain a minimum grade of 5 points out of 10.

- Global system

The student must take a theoretical-practical test on the date set by the Center.

In second call, a theoretical-practical test will be carried out on the date set by the Center.

To pass the subject through the continuous system it is necessary to obtain a minimum of 5 points out of 10, similarly in the global evaluation system

## **6. Sustainable Development Goals**

4 - Quality Education

8 - Decent Work and Economic Growth