

**Doctoral School of Economics and Business Administration (DSEBA)**

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***METHODS FOR QUANTITATIVE ANALYSIS***

**Course Outline**

1. Specific notions and methods (The aim of quantitative research. Concepts. Methods. Types of quantitative research)
2. Observing and collecting data
3. Exploring data with numerical and graphing techniques: description of univariate, bivariate, and multivariate distribution
4. Estimation and hypothesis testing
5. Analysis of Variance
6. Correlations and associations
7. Regression analysis

**The assessment will be based on a project on the description of an univariate and bivariate analysis of a population of interest in doctoral research.**

**Requirements**

1. Defining the population and identification of the variables on the base of both the aim and the objectives of the research.
2. Numerical and graphing techniques for the description of univariate, bivariate, and multivariate distribution
3. Estimation and significance test about the mean
4. Analysis of Variance (ANOVA)
5. Correlations and associations
6. Analysis of the influence of the explanatory variables (factorials) on a response variable (for multiple regression and for logistic regression).

**For the description and analysis of a population, register a sample of size  $n \geq 30$  units and at least 4 variables, from which 2 quantitative variables and 2 categorical variables.**