



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Metodi Statistici per il Marketing

2122-1-F7702M038-F7702M103M

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#### Learning objectives

The aim of the course is to introduce statistical techniques to perform a well-conducted analysis of real data from a population census or sample surveys.

#### Contents

The contents of the course can be schematically arranged in five parts:

- 1) Descriptive Statistics
- 2) Probability
- 3) Inference
- 4) Linear regression model
- 5) Cluster Analysis

#### Detailed program

#### 1) Descriptive Statistics:

- Univariate distributions
- Location and variability
- Bivariate distributions
- Association

#### 2) Probability:

- Definition and properties
- Random variables (discrete vs. continuous)
- Expectation, Variance, and Covariance

#### 3) Inference:

- Estimators
- Comparison (Mean Squared Errors and efficiency)
- Confidence Intervals
- Hypotheses testing

#### 4) Linear regression model:

- Simple linear model
- Multiple linear model
- Inference

#### 5) Cluster Analysis

- k-means
- Hierarchical methods

### **Prerequisites**

Elements of mathematical analysis.

### **Teaching methods**

Class lectures and exercises through Excel.

### **Assessment methods**

Written exam.

### **Textbooks and Reading Materials**

- **Statistica per le decisioni.** Domenico Piccolo. Il Mulino.
- **Statistica per le analisi di Mercato - Metodi e strumenti.** Francesca Bassi e Salvatore Ingrassia, Pearson.

### **Semester**

Second semester.

## **Teaching language**

Italian.

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