



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Statistica I

2122-1-E4101B005

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#### Learning objectives

The course is about **descriptive statistics**, both univariate and bivariate, for the analysis of data of various nature.

#### Contents

The course is about **descriptive statistics** and it is organized in two macro sections. The first part concerns **univariate statistics**, covering the notions of frequency distributions, measures of central tendency, variability and shape. \_\_\_\_\_

#### Detailed program

The course is devoted to descriptive statistics and it is divided in two macro sections.

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- Preliminary concepts
- Frequency distributions
- Measures of central tendency
  
- Measures of variability
  
- Main graphical representations
  
- Symmetry, kurtosis and multimodality

- Categorical data and heterogeneity indexes

## **Section II: bivariate statistics**

- Covariance and correlation
- Simple linear regression
- Partial correlation
- Analysis of variance
- Contingency tables
- Dependence among variables
- Time series

## **Prerequisites**

There are no prerequisites. However, it is strongly recommended the knowledge of basic notions of mathematics.

## **Teaching methods**

During the Covid-19 emergency lessons will be both in person and online.

## **Assessment methods**

The exam is based on a **written test** and sometimes on an oral test. Students are required to attend the **oral examination** only if the grade of the written part is **greater or equal than 27 out of 30**.

## **Textbooks and Reading Materials**

### **Textbook (in Italian)**

- Piccolo, D. (2010), *Statistica*, Terza edizione, Il Mulino.

### **Reading material (in Italian)**

- Cicchitelli, G. (2012), *Statistica principi e metodi*, Seconda edizione, Pearson.
- Piccolo, D. (2020). *Statistica per le decisioni*, Terza edizione, Il Mulino.

Moreover, additional teaching material (in Italian) will be available on the e-learning website.

## **Semester**

The course is scheduled in the first semester.

## Teaching language

Italian

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