



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Statistica I

1920-1-E4102B005

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#### Learning objectives

The Statistica I course is the first course of statistics in the bachelor of Statistica e Gestione delle Informazioni. It has as its objective to introduce students to the theoretical knowledge and practical skills of statistics that constitute the basis of the bachelor itself. Students at the end of the course must be able to recognize the nature of the statistical variables, knowing how to extract them from a database. They must also be able to represent them graphically in an appropriate manner and should be able to synthesize information that can be both univariate and bivariate through appropriate indicators. It will be required that the student begin to express himself clearly and with proper language, also knowing how to interact with professional figures not necessarily prepared on the statistical discipline.

#### Contents

Collection and classification of statistical data. Main tools of univariate and bivariate descriptive statistics.

#### Detailed program

- Statistics as a science
- Populations and statistical units
- Statistical variables and measurement scales
- Graphical representations
- Univariate frequency distributions
- Means

- Variability measures
- Standardized indices
- Asymmetry and skewness
- Bivariate distributions
- Stochastic independence and mean dependence
- Correlation.

## **Prerequisites**

No formal prerequisites required.

## **Teaching methods**

Lectures of theory and examples in the classroom. Exercises in the classroom with some exercises on the blackboard. Moreover, the teaching is flanked by tutoring activities in which further practical activities and corrections of exercises done at home are carried.

## **Assessment methods**

The exam consists of a written test that includes questions of theory and exercises. It is necessary to reach the sufficiency (18/30) in both parts that make up the written test.

Optional oral exam (at the request of the teacher or student).

## **Textbooks and Reading Materials**

L. Deldossi, R. Paroli, Lezioni di statistica, G. Giappichelli Editore, Torino, 2015

G. Leti, L. Cerbara, Elementi di statistica descrittiva, Il Mulino, Bologna 2009

L. Santamaria, Statistica descrittiva – Applicazioni economiche e aziendali, Vita e Pensiero, Milano 2006

A. Zanella, Elementi di statistica descrittiva, CUSL, Milano 2000

M. Zenga, Lezioni di statistica descrittiva, G. Giappichelli, Torino 2007

## **Semester**

I Semester, I cycle

## **Teaching language**

Italian

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