



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Economic Statistics I

2526-2-E1401A014

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#### Learning objectives

The course is an introduction to statistics, aiming at building the theoretical competences needed in reading a descriptive analysis and the practical competences needed in performing one.

In particular

A) Knowledge and learning abilities

To know and to be able to interpret the fundamental synthetic descriptive measures of uni- and bivariate distributions.

To be able to read and interpret a linear regression.

B) Applied learning abilities

To be able to choose the appropriate descriptive measures and statistical arguments, in contexts relevant to the legal practice.

C) Independent judgement

To acquire independence in formulating and evaluating statistic argument related to the legal practice.

D) Communication abilities

To be able to communicate to a diverse audience the relevant statistical arguments, in particular by proposing and presenting graphical representations.

E) Learning abilities

To be able to compare different synthetic measures and different statistical arguments, in the application context, and to be able to fix selection criteria.

## Contents

1. Descriptive statistics
2. Linear regression
3. Statistical inference

## Detailed program

1. data
  - collection
  - variables
  - ratios
  - distributions
  - indexes
2. descriptions
  - centrality
  - variability
  - independence
  - correlation
  - concentration
  - eterogeneity
  - asymmetry
3. models
  - linear regression
  - sketch of statistical inference

## Prerequisites

Basic mathematics.

## Teaching methods

- 20 two hours classes, frontal and held in presence
- 2 two hours laboratories, interactive and held remotely

## Assessment methods

A written test, consisting in multiple choice questions, problems, and exercises.

The test verifies the ability to correctly organiza the computation af a synthetic measure, the ability to correctly read its results, and the fundamental theoretical notions.

## **Textbooks and Reading Materials**

Piccolo D., Statistica per le decisioni, terza edizione, Il Mulino, 2020, ISBN 978-88-15-27220-1

## **Sustainable Development Goals**

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