



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Statistical Methods and Computer Science

1920-2-E3301M194

---

#### Learning objectives

The objective is to provide students with a solid foundation in some of the most important, broadly used, statistical and probabilistic models, as well as to introduce the basic concepts of computer science.

The course also aims to provide some experience in applying those statistical methods to a broad range of real economic problems. Moreover, the student will learn the structure and evolution of the automation systems and their main application areas.

The student will acquire the ability to interpret results and will develop his own point of view in reading tables and graphs, even made by a third part, related to economic studies.

To fulfill these purposes, the course is partitioned in the modules of computer science (Informatica Generale) and statistical methods (Metodi Statistici).

#### Contents

Probability and statistical methods and their relevance in economics.

Introduction to Computer Science, digital data representation, machine architecture, introduction to Algorithms, data base and SQL, operating System, computer networks.

#### Detailed program

See the dedicated sections of each module.

## **Prerequisites**

An introductory course of descriptive statistics.

## **Teaching methods**

Some frontal lessons (theory and examples) and some practical sessions (exercises) are provided. Lessons of the Computer Science module take place in computer science lab to allow students to immediately apply the concepts explained.

## **Assessment methods**

Students can do a partial test for each module. The final mark is obtained as weighted average of the partial tests, according to the credits (CFU) of each module.

## **Textbooks and Reading Materials**

See the dedicated sections of each module.

## **Semester**

First and second semester.

## **Teaching language**

Italian.

---