UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# COURSE SYLLABUS

## Complementary Statistics

**2425-3-E1801M046-E1801M066M**

### Learning objectives

The aim of the course is to introduce basic problems in statistical inference and to provide the main concepts and tools of statistical inference. The interplay among the contets of the course will be exemplied through examples.

### Contents

The main concpets and basic tools of statistical inference.

### Detailed program

- Main concepts of probability theory
- Random variables
- Some probabilistic models: Bernoulli and binomial distributions, Poisson distribution, normal distributions, chi-squared, t-Student's distributions and their approximations
- Sampling distributions: an overview
- Point estimate, confidence interval, and hypothesys testing: theory and examples.

### Prerequisites

Main concepts of univariate and bivariate descriptive statistics.

## Teaching methods

Face-to-face lectures in the delivery mode.

## Assessment methods

Thw will be just the final exam.
The exam is written and includes multiple choice questions and numeric exercises (using a non-programmable calculator and statistical tables). The aim of the exam is to evaluate the knowledge of tne concepts and their application.

## Textbooks and Reading Materials

Cicchitelli, D'urso, Minozzo. Statistica: principi e metodi, Ed. Pearson.

## Semester

First semester

## Teaching language

Italian

## Sustainable Development Goals

QUALITY EDUCATION