



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Biostatistics

2122-99R-BS

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#### Titolo

Fundamentals of Biostatistics

#### Docente(i)

Daniela Besozzi, Università di Milano-Bicocca  
Paolo Cazzaniga, Università di Bergamo  
Marco S. Nobile, Università di Milano-Bicocca

#### Lingua

English

#### Breve descrizione

The fundamental concepts and methods of biostatistics will be presented and critically discussed. Hands-on sessions in computer lab will provide practice on the use of spreadsheets for the statistical analysis of biological data.

Main topics:

- Descriptive statistics
- Probability theory and probability distributions
- Inferential statistics
  - Sampling distributions
  - Correlation and regression
  - Hypothesis testing (p-value)
  - Multisample inference (ANOVA)

**Aims:**

The course will introduce the basic concepts of statistics for the analysis of biological data. The objectives of the course are the development of critical ability and practical skills concerning:

1. the choice of the proper statistical methods and the interpretation of analysis outcomes;
2. the automatic organization and handling of biological data by means of spreadsheets.

The course is mainly addressed to PhD students of the life sciences area.

**Suggested year of attendance:**

1 year

**Prerequisites:**

participants should have (at least) basic notions in the use of spreadsheets. The teachers will make use of Excel to propose exercises for the hands-on sessions, but participants can use any other spreadsheet application on their personal computers.

**CFU / Ore**

2 CFU / 16 h

**Periodo di erogazione**

July

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