



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Biostatistica (blended)

2324-1-F0901D043-F0901D086M

Aims

Basic knowledge of the most important statistical-methodological tools of the descriptive and inferential statistics for: design of experiments, data collection and analysis, the complexities of lab data.

The student will be able to: understand the main concepts of study design, implement statistical analysis, read the scientific literature presenting descriptive and inferential statistic results.

Contents

The goal of the course is to contribute to the education of the medical biotechnologist in order to be able to:

- understand the principles of the experimental design in medicine and biology
- understand the most important statistical techniques for data analysis
- understand the specificities of the lab data
- use a software for data analysis (additional)

Detailed program

The module is organized as follows:

- Basics of probability calculation
- Confidence interval on the parameter p probability of an event (proportion)
- Frequency tables and graphs
- Order of magnitude and dispersion indicators

- Gaussian Distribution (to approximate the trend of a histogram)
- Maximum likelihood estimation
- Confidence interval on the mu parameter
- Hypothesis testing on p
- Use of the Gaussian distribution to construct confidence intervals

Prerequisites

None.

Teaching form

Standard classes, on-line quiz, video clip.

Textbook and teaching resource

- SULLIVAN, Michael. Fondamenti di statistica. Pearson, 2011.
- Slides

Semester

First semester.

Assessment method

Written test

- The written exam takes place on the university's esamionline platform in the laboratory
- 10 questions with 4/5 answers of a calculation required
- 30 minutes
- 3 points scored for each question

Office hours

To be defined with the student by email contact.

Sustainable Development Goals
