



PhD Course on “Biostatistics”

- Introduction to biostatistics
- Study design and research protocols
- Descriptive statistics
- Variable types and data coding
- Statistical inference: populations and samples
- Point estimates and confidence intervals
- Statistical tests
- Association and prediction: linear regression with one or more explanatory variables
- Comparison between groups or treatments: analysis of variance
- Contingency tables
- Association and prediction: logistic regression with one or more explanatory variables
- Sample-size planning for statistical power and accuracy in parameter estimation

During this course, students will analyze primary research articles in the fields of medicine and biology to gain an understanding of the statistical approaches used for data analysis. Thus, they will learn how to more easily extract the main conclusions from the text and figures of such articles.

The objectives of this course are:

- To gain a solid foundation in the principles of statistics and statistical data analysis
- To learn how to use fundamental statistical tools to correctly evaluate scientific hypotheses
- To become familiar with the statistical analyses used in empirical studies
- To acquire new skills for interpreting data and presenting research findings
- To improve understanding of the methodological limitations and strengths of scientific studies
- To develop critical thinking skills to achieve a more in-depth understanding of scientific studies.

Class Meeting:

Aula 4 – Gavazzi Via Bengasi, 4 - From 14.00 to 18.00 (Duration: 24h)

Wednesday - March 29

Wednesday - April 12

Wednesday - April 26

Wednesday - May 10

Wednesday - May 24

Wednesday - June 7