



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Introduction to statistics with R (part I): data description and basic inference

2223-DOTT-MOD10-1

Title

Introduction to statistics with R (part I): data description and basic inference

Teacher(s)

Dr. Davide Paolo Bernasconi

Language

English

Short description

Objectives

The course, through lectures and computer lab sessions, aims to illustrate the fundamentals of statistical modeling with multiple covariates focusing on the linear and **Objectives**

The course, through lectures and computer lab sessions, aims to provide basics notions of statistics to plan and analyze the results of a scientific study or experiment.

At the end of the course the participants should be able to choose the most suitable design for their study,

compute the optimal sample size, perform a graphical and tabular description of the data collected and analyze the association between variables through proper measures and hypothesis testing.

Course program

Day 1:

- Planning a study: types of designs
- Data summaries: descriptive measures and graphical representations.
- Lab session with R

Day 2:

- Introduction to hypothesis testing
- Parametric tests for quantitative variables
- Lab session with R

Day 3:

- Non-parametric tests for quantitative variables
- Tests for categorical variables
- Lab session with R

Day 4:

- Correction for multiple comparisons
- Sensitivity, specificity and Lab session with R

Target audience

Doctoral students of any discipline who are interested in the practical application of basic statistical methods for data analysis in scientific research

Participants

Min 20 Max 40

CFU / Hours

2 CFU / 16 hrs

Teaching period

11/01/2023 9 am - 1 pm lab907 (Building U9 KOINE')
13/01/2023 2 pm - 6pm lab905 (Building U9 KOINE')
18/01/2023 9 am - 1 pm lab716 (Building U7 CIVITAS)
20/01/2023 2 pm - 6 pm lab907 (Building U9 KOINE')

course registration on "Segreteria online": from 20/12/2022 to 04/01/2023

Sustainable Development Goals

QUALITY EDUCATION
