

Online Course on R: Statistical Analysis and Data Visualization

This course will be held in six weekly lessons, from 03/11 to 15/12/2025, with a span of 2 hours each, including a brief break after one hour of lesson.

The course program will be as follows:

1. Introduction to R (lesson 1)
 - a. Types of data (vector, lists, data frames, etc.)
 - b. Importing data files (csv, Excel files, etc.)
 - c. Dealing with date and timestamp (date formats and conversions)
 - d. Data manipulation (subset, filtering, grouping, etc.)
2. Programming basics (lesson 1 and 2)
 - a. IF conditions
 - b. FOR loops
3. Basic plots with R (lesson 2 and 3)
 - a. ggplot2 package (line plots, scatter plots, boxplot, etc.)
 - b. Multiple plots in one figure (ggarrange function from ggpubr package)
4. Data analysis in R (lesson 3 and 4)
 - a. Basic concepts of normality and homoscedasticity
 - b. Can I use parametric tests?
 - c. ANOVA and Tukey tests (parametric tests)
 - d. Nonparametric tests (e.g. Wilcoxon, Kruskal-Wallis, etc.)
5. Linear regression and multivariate analysis (lesson 4 and 5)
 - a. Linear regression (with and without intercept)
 - b. Logistic regression
 - c. Polynomial regression
 - d. Multivariate regression

Lesson 6 would be used to cover content that was left out during the other lessons (due to lack of time) and for doubts and curiosities.

After the 2-hours lessons, there will be time for questions and troubleshooting with the students, for those who are interested or who have had difficulties during the lesson.

The link below to demonstrate interest on the course will be open until November 7th at 12:00 (CET), and the selected participants will be contacted on the afternoon of the same day.

[Demonstrate your interest on the Online Course on R - Statistical analysis and data visualization](#)

The lessons will be held from 14:00 to 16:00 (Central European Time), on the following days:

- November 10th,
- November 17th,
- November 24th,
- December 1st,
- December 8th,
- December 15th.

We do ask the participants to be consistent attending the lessons and following the program, it will be important for the learning progress.