

# Course evaluation report

## 1. Course information

- Course title: **PSY9510 Introduction to Statistics with R**
- Semester and year: Spring 2025
- Course coordinator: Luis Eduardo Munoz
- Report authors: Irene Teulings & Libor Potočár
- Date of summary: 15 April 2025

## 2. Assessment of the course

- The course walks the participants through the basics of R programming, whereas the emphasis is placed on the practical mastery of the tools mostly used to manipulate behavioral data. An important goal of this course is to foster students' analytical independence in R so that they are capable of developing their skills in the future. The main **learning outcomes** are the following:
  - Become familiar with R and the RStudio environment.
  - Understand datatypes and their characteristics.
  - Manipulate different data structures.
  - Perform data cleaning and data management using base R and the tidyverse package.
  - Carry out data quality checks.
  - Write and organize R syntax and implement reproducible analyses within RStudio.
  - Produce descriptive statistics in R and run basic statistical analyses.
  - Produce publication-ready graphics with ggplot2 package.
- **Teaching methods and organization:** The course duration is equivalent of 24 seminar hours and is offered each semester. Seminars are composed of mini-lectures and practical computer exercises in R. 1 credit point is awarded for 80% participation and submitting a home assignment (a reproducible Quarto report).

## 3. Student's feedback

- Most students reported high satisfaction and having greatly benefited from the course, especially those who indicated a beginner's level. Some students at an intermediate level with more previous experience reported that the difficulty level was partially too low for them.
- 1 ECTS for 4 teaching days and a home assignment seems inadequate.
- All course materials should be made available centrally if teaching is managed by multiple course leaders.
- More consistency or clearer separation between the base R and tidyverse approaches would be desirable to avoid confusion.
- Some of the exercises contained mistakes, and the instructions were a bit unclear (e.g., which dataset we were supposed to use).

#### 4. Overall assessment and further development

- We acknowledge the need to position the course as an introductory course for R beginners. The official webpage currently states that “no previous knowledge of programming or R language is required”, but we may additionally consider adding that it is designed as a beginner-level course.
- It may be beneficial (on the very first day or via an online questionnaire before the course begins) to check the previous experience and familiarity of the course participants with R.
- Relatedly, the title of the course “Introduction to Statistics with R” is somewhat misleading given that statistics is covered only on the last day (25% of the course), with emphasis being put on data manipulation and preparation. A more suitable title for the course would be simply “Introduction to R”.
- We need to consider reducing the length of the course to 3 days (instead of 4) or applying for additional ECTS credits (2 instead of 1) so that the actual workload matches the number of awarded credits.
- If the course continues to be taught by multiple seminar leaders, better coordination may be needed – for example, all course materials should be made available to students in the same way.
- We believe that exposing students to both base R and tidyverse approaches to data manipulation in R is important, yet we understand this may create confusion if not separated clearly. We will aim to introduce the idea of these different basic approaches already on the first day, hopefully making this clearer from the very beginning.
- The provision of course materials may be made clearer (e.g., by making separate, exercise-/session-specific folders with required datasets), and computer exercises should be checked for errors.