

What is R?

R is a program package for statistical data analysis, modeling and visualization. The program is executable under many platforms like UNIX, Windows and Macintosh. One of the biggest advantages of R is that the program is freely available as an open source software (www.r-project.org). Due to that unrestricted access, R has developed to one of the standard statistical software in universities and research institutions in the last years.

Topics of the Course

The course will cover the following main topics:

- Basics of R
- Data management in R
- Graphics in R
- Statistical background
- Descriptive statistics
- Statistical hypothesis tests

Principle of the Course

Learning a software is impossible without own practice! In the course the different subjects are presented and clarified by examples. In addition, further example data sets are provided for exercises in order to get a deeper understanding.

Course Objectives

After the course participants should:

- have lost the fear of using R
- have learned the basic functions of R
- know how to import and export raw data in R
- be able to create a descriptive and graphical overview of a data set
- select the appropriate hypothesis test for an available data set and research question

Do I need any Previous Knowledge?

Participants of the course have to fulfill the following (very easy) qualifications:

- simple computer skills
- basic statistic knowledge (knowing what an arithmetic mean is, is enough...)

Anything else?

- The operation system of the computers in the CIP-pool is UNIX. However, running and working with R is basically the same than with a Windows computer.
- Participants are welcome to bring their own netbooks to the course and work with them instead of the processors in the CIP-pool.