



Applied Statistics on PC

Organization:

Course type:	Tutorial
Semester hours per week:	2
Prerequisites:	Statistical Methods I (Methoden der Statistik I)
Turn:	Every turn (summer term + winter term)
Exam type:	Written exam (60 min)
ECTS:	4

Learning objectives:

The students are taught the basic usage of the statistical software R. They are enabled to handle external data sets, to create data objects internal to R and to apply R functions. The knowledge to implement statistical methods, especially for data visualization, sampling as well as estimation and testing procedures is also imparted.

Course description:

R is a free statistical software package which is continuously developed by a worldwide user community. R knowledge is nearly indispensable for socio-scientific research and more and more demanded on the job market.

The tutorial “Applied Statistics on PC” (“Angewandte Statistik am PC”) complements the introductory lecture of statistical methods. Basic skills to import, to manipulate and to analyze data with R are acquired. In particular, the learning contents of “Statistical Methods I & II” (“Methoden der Statistik I & II”) are implemented. In a first step, the use of basic R-objects and –functions is practiced. On this basis, the graphical visualization of data, the estimation of measures of location and dispersion as well as current hypothesis testing methods, particularly t- and F-tests are focused.

Content overview:

1. Statistical revision course
2. Working with objects
3. Data visualization
4. Distributions and samples
5. Estimation
6. Tests
7. Loops in R