



Statistical Methods I (Methoden der Statistik I)

Organization:

Course type:	Lecture + Tutorial
Semester hours per week:	3 + 1
Prerequisites:	-
Turn:	Every turn (summer term + winter term)
Exam type:	Written exam (90 min)
ECTS:	6 (variations possible)

Learning objectives:

The students of “Statistical Methods I” are introduced to the basic principles of descriptive statistics. They are enabled to distinguish between different data types with routine and to process them graphically. In addition, fundamental methods of analysis, regarding location, dispersion and correlation of characteristics, are taught.

Course description:

The course “Statistical Methods I” deals with descriptive statistics. Methods for presenting clearly and analyzing data are emphasized. Moreover, the knowledge about meaningful measures for the characterization of data, in particular location parameter, dispersion parameter and correlation coefficients, is imparted. Finally, the linear regression, as a simple method for estimating the influences on an independent variable, is presented.

Besides the implementation, especially the prerequisites for the applicability of certain methods, as well as the meaningful interpretation of results, are discussed. Thereby the focus of the lecture is on the theoretical derivation, while the own calculation of measures, as well as their interpretation, are centered in the tutorial.

Content overview:

1. Basic notions of descriptive statistics
2. Frequency distributions and graphical presentation of qualitative characteristics
3. Frequency distributions and graphical presentation of ordinal characteristics
4. Frequency distributions and graphical presentation of quantitative characteristics
5. Location parameter
6. Dispersion parameter
7. Bivariate frequency distributions
8. Correlation parameter
9. Linear regression