

# Management and Statistical Analysis of Survey Data

## Instructor

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## Course description

The course addresses methods of collecting and managing survey data for empirical studies. The main focus is on the various types of surveys including the design of appropriate questionnaires, basic strategies for sampling, and methods for handling the data electronically. Some advanced multivariate statistical methods complete the course. Practical exercises (analysis of questionnaire, practical survey, data entry, basic statistical analysis) will be performed during the course.

## Course outline

1. Introduction
2. Data collection
  - Types of surveys
    - experiment, observational study, questionnaire study, secondary data
    - questionnaire studies: interviewer based vs. non interviewer based, paper and pencil vs. computer based, face-to-face vs. telephone based, internet surveys
  - Sampling
    - random based vs. non random based
    - simple, stratified, clustered, multilevel
  - Questionnaire design
    - types of questions and answers
    - scales
    - Likert scales
    - quality criteria
  - Formal aspects and protection of privacy
3. Data management
  - software
  - coding
    - closed questions
    - open questions
    - multiple answers
    - missing values
  - data entry
4. Data analysis
  - software
  - description
  - regression analysis, analysis of variance
  - factor analysis
  - cluster analysis

**Teaching methods**

Lectures (50%), exercises, software application, and group work (50%)

**Grading**

Presentations in exercises sections (50%) and participation (50%)

**Credit Points**

3

**Requirements**

Statistics (basic level)

**Software**

Open source software "R": <http://www.r-project.org>

**Language**

Course will be taught in English, practical survey designed partly in German

**References**

- Afifi, A., Clark, V.A., May, S. (2004), Computer-Aided Multivariate Analysis, 4<sup>th</sup> ed., Chapman & Hall, Boca Raton.
- Bartholomew, D.J., Steele, F. Moustaki, I., Galbraith, J.I. (2002), The Analysis and Interpretation of Multivariate Data fo Social Sciences, Chapman & Hall, Boca Raton.
- Levy, P.S., Lemeshow, S. (1999), Sampling of Populations. Methods and Applications, 3<sup>rd</sup> ed., Wiley, New York.
- Saris, W.E., Gallhofer, I.N. (2007), Design, Evaluation, and Analysis of Questionnaires for Survey Research, Wiley, Hoboken.