

t.STMO - Statistisches Modellieren

Person responsible for the course: Andreas Ruckstuhl, rkst

Credits: 4

Valid for: 2011/2012

Last saved: 16.08.2011 11:23

Learning objectives:

The students are familiar with multiple regression methods and are aware of which principle they are deduced from. Furthermore they can apply the discussed methods practically using a statistic software.

Course content:

Multiple regression model, estimation (including the maximum likelihood principle and robust fitting methods), model adequacy checking (residual analysis), hypothesis testing, confidence and prediction intervals, variable selection (including Akaike's Information Criterion AIC), model building, local regression, additive models.

R (a freely available language and environment for statistical computing and graphics) is used to apply the introduced methods

Previous knowledge:

WAST3

Teaching method:

| Type of lesson: | Number of lessons per week: |
|--------------------|-----------------------------|
| Lecture | 14 x 2L |
| Tutorial/Practicum | 14 x 2L |
| Group teaching | |
| Block instruction | |
| Seminar | |

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

| Number | Type | Weighting |
|--------|--------------------------|--------------|
| 1 | End of term exam | 0.65 |
| 1 | Exam during the semester | 0.2 as bonus |
| 1 | Further assessments | 0.15 |

Language of instruction:

Deutsch

Instruction material:

Lecture notes

Comments:

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