GRA 6020 Multivariate Statistics

Program
Master of Science (common course)

Responsible for the course
Ulf Henning Olsson

Department
Economics

Term
Fall

ECTS Credits
6

Objective
- To understand and be able to apply some of the most known multivariate statistical techniques to research problems in the student's discipline of interest.
- To illustrate the use of actual statistical soft ware. It is the responsibility of the student to familiarize himself/herself with the fundamentals of this or similar statistical analysis software.
- To provide an understanding for the statistical assumptions underlying these techniques.

Prerequisites
An introductory course in statistics.

Compulsory literature
Hair, Joseph F. Jr., Rolph E. Anderson, Ronald L. Tatham and William C. Black. 1998. *Multivariate data analysis* . 5th ed. N.Y.: Macmillian.
Selected articles and handouts.
Jøreskog, Karl G. and Dag Sørbom. 1993. *LISREL 8: Structural Equation Modeling with the SIMPLIS command language* . ChicagoScientific Software Internationa

Recommended literature
Gujarati, Damodar N. 1995. *Basic econometrics* . 3rd ed. New York: McGraw-Hill.

Course outline
1. The idea of significance testing.
2. The linear regression model.
3. Factor analysis
4. Exploratory factor analysis
5. Confirmatory factor analysis
6. Cluster analysis

Computer-based tools
The course uses modern statistical software.

Course structure
Lecture format.

Evaluation
Term paper

Evaluation code(s)
GRA60201

Aids at the examination

Makeup exam
At the next regular exam.