



APPLIES TO ACADEMIC YEAR 2007/2008

## GRA 6036 Multivariate Statistics with econometrics

### Program

Common Course, Master of Science in Business and Economics, Master of Science in Financial Economics

### Responsible for the course

Ulf Henning Olsson

### Department

Economics

### Term

According to study plan

### ECTS Credits

6

### Language of instruction

English

### Objective

- To understand and be able to apply some of the most known and modern multivariate statistical techniques.
- To illustrate the use of actual statistical software. It is the responsibility of the student to familiarize himself/herself with the fundamentals of this or similar statistical software.
- To provide an understanding for the statistical assumptions underlying these techniques.

### Prerequisites

Basic Statistics, Linear Algebra and an Introductory Course in Econometrics

### Compulsory literature

#### Books:

Kaplan, David. 2000. Structural Equation Modeling: Foundations and Extensions. Thousand Oaks, Calif.: Sage. Approximately 130 pages

#### Collection of articles:

Articles and book chapters in two compendiums

### Recommended literature

#### Course outline

- The Logit and The Probit Models
- Panel Models
- Factor Analysis
- Simultaneous Equations
- Structural Equation Models
- Estimation and Distribution Theory
- (Multilevel models with latent variables)

#### Computer-based tools

The course uses modern statistical software e.g. LISREL, SPSS, STATA, SAS, EVIEWS etc.,

#### Course structure

Lectures and exercises.

Specific Information regarding student evaluation will be provided in class. Please note that while attendance is not compulsory in all courses, it is the student's responsibility to obtain any information provided in class that is not included on the course homepage/Blackboard or text book.

**Evaluation**

Term paper and a two hour multiple choice control exam. Groups of up to three students on the term paper. The control exam must be passed to obtain course credits. The term paper counts for 75% of the grade and the multiple choice control exam counts for 25% of the final grade.

For further information please see information placed on Blackboard and the web

**Evaluation code(s)**

GRA 60361 for the term paper (75%)

GRA60362 for the multiple choice exam (25%)

**Aids at the examination**

All aids are allowed.

Support materials at written examinations are explained under exam information in our web-based student handbook. Please note use of calculator. <http://www.bi.no/studenthandbook>.

**Makeup exam**

Re-takes are only possible at the next time a course will be held. When course evaluation consists of class participation or process elements, the whole course must be re-evaluated when a student wants to retake a exam. Retake examinations entail an extra examination fee.

This course consists of two separate evaluation codes; GRA 60361 and GRA 60362. Hence, student may re-take only one of the evaluations and not the whole course. Please note that students who only retake the control exam need to be aware that the exam may be based on the term paper given this semester. Students should therefore regard the term paper as a part of the course literature, even if the students already have a passing grade in the term paper.

**Honor Code**

Academic honesty and trust are important to all of us as individuals, and represent values that are encouraged and promoted by the honor code system. This is a most significant university tradition. Students are responsible for familiarizing themselves with the ideals of the honor code system, to which the faculty are also deeply committed.

Any violation of the honor code will be dealt with in accordance with BI's procedures for cheating. These issues are a serious matter to everyone associated with the programs at BI and are at the heart of the honor code and academy integrity. If you have any questions about your responsibilities under the honor code, please ask.