



APPLIES TO ACADEMIC YEAR 2009/2010

## GRA 6036 Multivariate Statistics with Econometrics

### Programme

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

### Responsible for the course

### Department

Department of Economics

### Term

According to study plan

### ECTS Credits

6

### Language of instruction

English

### Introduction

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### Learning outcome

- 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 reading

#### Books:

Kaplan, David. 2009. Structural equation modeling : foundations and extensions. 2nd ed. London : Sage Publications. Approximately 130 pages

#### Collection of articles:

Articles and book chapters in two compendiums

### Recommended reading

#### 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.,

#### Learning process and workload

Lectures and exercises.

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

**Examination**

Term paper and a two hour multiple choice control exam. Groups of up to three students on the termpaper. The control exam must be passed to obtain course credits. The termpaper 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

Specific information regarding student evaluation beyond the information given in the course description will be provided in class. This information may be relevant for requirements for term papers or other hand-ins, and/or where class participation can be one of several elements of the overall evaluation.

**Exam code(s)**

GRA 60361 for the termpaper (75%)

GRA60362 for the multiple choice exam (25%)

**Examination support materials**

All aids are allowed. Only BI-approved calculators are allowed at examinations. Exam aids at written examinations are explained under exam information in our web-based Student handbook. Please note use of calculator and dictionary.

<http://www.bi.edu/studenthandbook/examaids>

**Re-sit examination**

Re-takes are only possible at the next time a course will be held. When the course evaluation has a separate exam code for each part of the evaluation it is possible to retake parts of the evaluation. Otherwise, the whole course must be re-evaluated when a student wants to retake an exam. Retake examinations entail an extra examination fee.

Please note that students who only retake the control exam need to be aware that the exam may be based on the termpaper given this semester. Students should therefore regard the termpaper as a part of the course literature, even if the students already have a passing grade in the termpaper.

**Additional information****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 academic integrity. If you have any questions about your responsibilities under the honor code, please ask.