



APPLIES TO ACADEMIC YEAR 2008/2009

GRA 6020 Multivariate Data Analysis

Program

Core Course, Master of Science in International Marketing and Management, Master of Science in Leadership and Organizational Psychology, Master of Science in Marketing, Master of Science in Political Economy

Responsible for the course

Fan Yang Wallentin

Department

Department of Economics

Term

According to study plan

ECTS Credits

6

Language of instruction

English

Learning outcome

- 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 software. 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

Books:

Hair, Joseph F ... et al. 2006. Multivariate data analysis. 6th ed. Upper Saddle River, N.J.: Pearson Education

Jøreskog, Karl G. and Dag Sörbom. 1995. LISREL 8: Structural equation modeling with the SIMPLIS command language. 3rd printing, with foreword and computer exercises. Chicago : Scientific Software International

Other:

Jøreskog Karl G. 2002. Structural Equation Modeling with Ordinal Variables. (Can be downloaded: <http://www.ssicentral.com/lisrel/ordinal.pdf>)

Recommended literature

Books:

Gujarati, Damodar N. 2003. Basic econometrics. 4th ed. New York: McGraw-Hill

Kaplan, David. 2000. Structural equation modeling: Foundations and extensions. Thousands Oaks, Calif.: Sage Publications

Course outline

1. The basic idea of hypothesis testing.
2. The linear regression model.
3. Qualitative Response Regression Models (Logistic regression)
4. Explanatory factor analysis
5. Exploratory factor analysis
6. Confirmatory factor analysis
7. Structural Equation Modeling

Computer-based tools

The course uses modern statistical software. Blackboard/homepage

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 account for 100% of the grade. Groups of up to three students on the term paper. The multiple-choice exam is graded and counts for 25% of the final grade and must be passed to obtain course credits. For further information please see information placed on Blackboard and the web.

Evaluation code(s)

GRA 60205 for the term paper (75%)

GRA 60206 for the multiple choice exam (25%).

Aids at the examination

All aids are allowed. 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>

Makeup exam

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 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.