



APPLIES TO ACADEMIC YEAR 2016/2017

GRA 6036 Multivariate Statistics

Programme

Core Course, Master of Science in Business, Master of Science in Business (Business Law - Tax and Accounting), Master of Science in Business (HRM), Master of Science in Business (International Business), Master of Science in Business (Logistic - Supply Chains and Networks), Master of Science in Business (Marketing), Master of Science in Business (Strategy)

Responsible for the course

Steffen Grønneberg

Department

Department of Economics

Term

According to study plan

ECTS Credits

6

Language of instruction

English

Introduction

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

All courses in the Masters programme will assume that students have fulfilled the admission requirements for the programme. In addition, courses in second, third and/or fourth semester can have specific prerequisites and will assume that students have followed normal study progression. For double degree and exchange students, please note that equivalent courses are accepted.

Compulsory reading

Books:

Bartholomew, David J. ... [et al.]. 2008. Analysis of multivariate social science data. 2nd ed. Chapman & Hall/CRC

Collection of articles:

Collection of articles: Articles and book chapters in two compendiums

Recommended reading

Course outline

Course outline

- Review of probability and statistical inference
- Cluster analysis
- Principal Component Analysis
- The linear regression model
- Logistic regression
- Exploratory factor analysis
- Confirmatory factor analysis
- Structural Equation Modelling

Computer-based tools

Eviews

Lisrel

SAS
SPSS
Stata

Learning process and workload

A course of 6 ECTS credits corresponds to a workload of 160-180 hours. 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/It's learning or text book.

Examination

Students will have ca 2 weeks for writing the term paper. We might require an oral defense of the term paper.

Form of assessment	Weight	Group size
Term paper	40%	Group of max 3 students
Written examination 3 hours	60%	Individual

Specific information regarding student assessment will be provided in class. This information may be relevant to requirements for term papers or other hand-ins, and/or where class participation can be one of several components of the overall assessment. All parts of the assessment must be passed in order to get a grade in the course. Candidates may be called in for an oral hearing as a verification/control of written assignments.

Examination code(s)

GRA 60363 for the term paper (40% of the final grade)

GRA 60364 for the written exam (60% of the final grade)

Both evaluations must be passed in order to get a grade in the course.

Examination support materials

BI approved exam calculator

Bilingual dictionary

Permitted examination support materials for written examinations are detailed under examination information in the student portal @bi. The section on support materials and the use of calculators and dictionaries should be paid special attention to.

Re-sit examination

It is only possible to retake an examination when the course is next taught. The assessment in some courses is based on more than one exam code. Where this is the case, you may retake only the assessed components of one of these exam codes. All retaken examinations will incur an additional fee. Please note that you need to retake the latest version of the course with updated course literature and assessment. Please make sure that you have familiarised yourself with the latest course description.

Additional information

Honour code. Academic honesty and trust are important to all of us as individuals, and are values that are integral to BI's honour code system. Students are responsible for familiarising themselves with the honour code system, to which the faculty is deeply committed. Any violation of the honour code will be dealt with in accordance with BI's procedures for academic misconduct. Issues of academic integrity are taken seriously by everyone associated with the programmes at BI and are at the heart of the honour code. If you have any questions about your responsibilities under the honour code, please ask. The learning platform itslearning is used in the teaching of all courses at BI. All students are expected to make use of itslearning.