



## GRADUATE SCHOOL

### **GM0614 Multivariate Data Analysis, 7.5 higher education credits**

Multivariate Data Analysis, 7,5 högskolepoäng

*Second Cycle*

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#### **Confirmation**

This course syllabus was confirmed by School of Business, Economics and Law on 2010-06-30 and was last revised on 2015-08-13 to be valid from 2015-08-31, autumn semester of 2015.

*Field of education:* Social Sciences 100%

*Department:* Graduate School

#### **Position in the educational system**

The course Multivariate Data Analysis, is a programme course within the Master of Science programme of Tourism and Hospitality Management and open for all programmes at the Graduate School, School of Business, Economics and Law, University of Gothenburg.

The course can be part of the following programmes: 1) Master of Science in Management (S2MAN), 2) Master of Science in Marketing and Consumption (S2MAC), 3) Master of Science in Accounting (S2ACC), 4) Master of Science in Economics (S2ECO), 5) Programme in Business and Economics (S1HEG), 6) Master of Science in Logistics and Transport Management (S2LOG), 7) Master of Science in Intellectual Capital Management (S2ICM), 8) Program in Environmental Social Science (S1SML), 9) Master of Science in Knowledge-based Entrepreneurship (S2KEN), 10) Master of Science in Environmental Management and Economics (S2EMA), 11) Programme in Logistics management (S1LOM), 12) Master of Science in Tourism and Hospitality Management (S2TOM), 13) Master of Science in Finance (S2FIN), 14) Master of Science in International Business and Trade (S2IBT) and 15) Master of Science in Innovation and Industrial Management (S2IFM)

#### *Main field of studies*

Tourism and Hospitality Management

#### *Specialization*

A1F, Second cycle, has second-cycle course/s as entry requirements

**Entry requirements**

To be eligible for the course Multivariate Data Analysis, the participant must fulfil the entrance qualifications for one of the Master of Science programmes at the Graduate School, School of Business, Economics and Law, University of Gothenburg and have passed one of the Research Methods courses (GM0609, GM0512, GM0312) or equivalent.

**Learning outcomes**

Upon completion of the course the student will be able to:

1. Discuss important aspects for designing research and selecting appropriate samples as well as statistical procedures for testing various types of hypotheses.
2. Formulate hypotheses and conduct significance tests using a selection of the most frequently used uni-, bi- and multivariate techniques;
3. Identify relevant multivariate techniques for various types of dimension reduction.
4. Critically and constructively analyse and discuss statistical methodology used in some selected examples of previous and present quantitative research.

**Course content**

The course Multivariate Data Analysis aims at providing students with an in-depth understanding of the various methodological approaches. The course provides a deep insight into various scientific and methodological approaches as well as practical training in the design and implementation of research projects. This includes sampling strategies, hypothesis testing, multivariate techniques and how to write up and present scientific reports. After completion of the course students will be able to identify a relevant methodological approach in relation to a research problem as well as to develop an appropriate research design for a quantitative study.

**Form of teaching**

Learning outcome 1 and 2 will be examined through written exam.

Learning outcome 2, 3 and 4 will be examined through written cases.

In order to pass the course, the student must receive Pass on the written exam as well as on the written cases.

A student who has failed a test twice has the right to change examiner, unless weighty argument can be adduced. The request shall be sent to the Graduate School and has to be in writing.

The Graduate School is obliged to offer the exam at least five times during the course of each two year period. Students who have made five unsuccessful attempts to pass an exam have lost the possibility of obtaining the Master of Science Degree.

*Language of instruction:* English

## **Assessment**

### **Grades**

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U). For Pass on the course, Pass is required on all four learning outcomes. For Pass with Distinction on the course, Pass with Distinction is required on learning outcomes one and two (written exam), and Pass on learning outcomes three and four.

Grades are translated with a set model where the grades correspond to the following intervals according to EGIS (ECTS Grade Interpretation Scheme):

Pass with Distinction (väl godkänd, VG)	A-B
Pass (godkänd, G)	C-E
Fail (underkänd, U)	FX-F

### **Course evaluation**

The course will be evaluated upon completion. The results of the evaluation will be communicated to the students and will function as a guide for the development of the course.

### **Additional information**

The syllabus in English is the official binding document.