

Course Title	Quantitative Methods II (EBE/FE)
Course Code	EBC1034
ECTS Credits	6,5
Assessment	Whole/Half Grades

Level	Intermediate
Coordinator	Dirk Tempelaar For more information: d.tempelaar@maastrichtuniversity.nl
Language of instruction	English
Goals	Introduction to the matrix representation of (linear) systems of equations, and to the (constrained) maximization or minimization of (nonlinear) functions of more than 1 variable. Introduction to the basic tools of inferential statistics, a.o. the independent-samples t-test, the paired-sample t-test, one-way-ANOVA, the chi-square test and regression analysis.
Description	QM II continues the quantitative topics that were initiated in QM I: mathematics and statistics. There is no separate formal training in (or testing of) computer science: this element has been integrated into the remaining two parts of the course.

In the statistics part, we will expand the coverage of inferential statistics, i.e. how to draw conclusions about a population based on a sample. Students will learn to apply the basic tools of inferential statistics (confidence intervals and hypothesis tests) to examine a large array of questions that may occur in economics or business. We will focus on the following topics:

- How to examine whether the mean of some quantitative variable (e.g. income) differs between two or more populations (e.g. men vs. women). Related to this, we will also examine what to do when the data are paired, and when the variable of interest is a proportion.
- How to analyse relationships between qualitative variables (e.g. between brand preference and gender).
- How to analyse relationships between two or more quantitative variables (e.g. between income and age) using regression analysis. This is one of the most frequently used statistical techniques in economics and business.

All these issues will involve the use of real-life data, which will be analysed using EXCEL.

Prerequisites Basic knowledge of mathematics and statistics, comparable to the course Quantitative Methods I, code EBC1005/1006/1007.

Assessment methods	Attendance / Written Exam
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This course belongs to the following programme / specialisation	Bachelor Economics and Business Economics - Economics	Year 1 Compulsory Course(s)
	Bachelor Economics and Business Economics - Emerging Markets	Year 1 Compulsory Course(s)
	Bachelor Economics and Business Economics - Economics and Management of Information	Year 1 Compulsory Course(s)
	Bachelor Economics and Business Economics - International Business Economics	Year 1 Compulsory Course(s)