



Bachelor's courses School of Business and Economics

VU University Amsterdam - Student- & Onderwijszaken - Exchange programme Vrije Universiteit - 2019-2020

Statistics

Course code	E_EOR1_STAT ()
Period	Period 4+5
Credits	6.0
Language of tuition	English
Faculty	School of Business and Economics
Coordinator	mr. M.H.C. Nientker
Examinator	mr. M.H.C. Nientker
Teaching method(s)	Lecture, Seminar
Level	100

Course objective

The course statistics is an introduction into the basic concepts of mathematical statistics. At the end of the course the student can formulate statistical models, derive different types of estimators, formulate and execute various hypothesis tests and construct confidence intervals.

Course content

In statistics one tries to make statements about the generating process behind observed data. The lectures include: statistical models, point estimations, hypothesis tests, and the construction of confidence intervals; probability theory and classes of probability distributions are added to these topics when they are needed. The material is illustrated on the basis of many (practical) examples. In this course, the emphasis is on parametric statistics, in which the probability distribution is known up to a finite number of parameters.

Form of tuition

Lectures: 2 times 2 hours of lectures per week

Tutorials: 1 time 2 hours of tutorial per week

The purpose of the lectures is to gain new knowledge and insights from mathematics. As the course progresses so will the level of abstractness. It is very helpful to prepare yourself by reading relevant sections in the book and/or lecture notes before you come to the lecture.

In the tutorials we focus on solving statistical problems in the form of exercises. Most exercises are of an applied nature although some will ask you to provide a theoretical result. Answers are important, but the route to the answer is obviously more important than the answer itself. Note that the exam questions will be very similar to the tutorial exercises. The tutorials are therefore a useful preparation for the examination.

Type of assessment

Individual assignment

Midterm - individual assessment

Final written exam - individual assessment

Course reading

"Statistical Inference" by G. Casella and R.L. Berger (2008), International Edition of the 2nd revised edition, Cengage Learning.

Lecture notes.

Recommended background knowledge

This course presumes that students are familiar with:

- Abstract reasoning
- Calculus
- Probability theory

Target group

First year Bsc Econometrie & Operations Research and first year Bsc Econometrics and Data Science.