



APPLIES TO ACADEMIC YEAR 2015/2016

EXC 2904 Statistics

Programme

Bachelor of Business Administration (1. year), Exchange Program

Responsible for the course

Svein Lund

Department

Department of Economics

Term

According to study plan

ECTS Credits

7,5

Language of instruction

English

Introduction

This course gives an introduction to statistics. Main themes are descriptive statistics, probability and hypothesis testing. Formulas and formal procedures play an important role, but the emphasis is on developing statistical literacy and critical thinking.

Learning outcome

Acquired knowledge:

- To understand the relevance of statistical analysis in economics and marketing
- Knowledge of basic concepts and overview of statistics
- Understanding the difference between a population and a sample
- Understanding what a random variable and a statistical model is
- Understanding that statistical methods are based on assumptions that must be checked
- Understanding what estimation and hypothesis testing is about
- To be able to reflect on the role of randomness
- To be acquainted with the statistical and mathematical notations used in statistics

Acquired skills:

- To be able to discern randomness from real underlying effects
- To be able to use statistical software and interpret computer displays from such software
- To be able to produce statistical graphics
- To be able to compute probabilities and confidence intervals
- To be able to conduct the most basic types of hypothesis testing and estimation

Reflection:

- To understand that statistical methods can be wrongly applied and lead to false conclusions
- To understand that in many situations a statistical analysis will help making better decisions

Prerequisites

No particular prerequisites.

Compulsory reading

Books:

Sharpe, Norean R., Richard D. De Veaux, Paul F. Velleman. 2015. Business statistics. 3rd ed., Global ed. Pearson

Recommended reading

Course outline

- Graphical and descriptive statistics
- Random samples and populations
- Discrete and continuous random variables
- Probability
- Statistical models
- Estimation

- Confidence intervals
- Hypothesis testing
- Correlation and regression
- Chi square tests

Computer-based tools

The course uses modern statistical software (SAS JMP). It's Learning/homepage.

Learning process and workload

There are 48 course hours, 38 of which are ordinary lectures where the syllabus is covered. The remaining 10 hours will be dedicated to SAS JMP demonstrations in class.

For each week there will be given a work programme with literature references and exercises. In the lectures the theory will be exemplified by a set of SAS JMP data samples with exercises. The final exam is loosely based on these SAS JMP examples.

Work requirements:

There are 8 mandatory multiple choice tests to be answered in It's Learning.

If a test is not approved in the first try, the student can retry. It is mandatory that the student get approved at least 5 of these tests in order to take the final exam.

The students' workload in hours:

Activity	Use of hours
Lectures and SAS JMP demos	48
Multiple-choice tests on Blackboard	50
SPSS work	42
Textbook study	40
Preparing for the final exam	20
Total recommended use of hours	200

Use of hours

Lectures 48 hours

Preparation for multiple-choice tests 6 hours (course responsible).

Coursework requirements

It is mandatory that the student must get approved at least 5 of 8 tests in order to take the final exam.

Examination

A five-hour individual written examination concludes the course.

Examination code(s)

EXC 29041 - Written exam, counts for 100% towards the final grade in EXC 2904 Statistics, 7,5 credits.

Examination support materials

All support materials + BI approved exam calculator. Examination support materials at written examinations are explained under examination information in the student portal @bi. Please note use of calculator and dictionary in the section on support materials (https://at.bi.no/EN/Pages/Exa_Hjelpemidler-til-eksamen.aspx).

Re-sit examination

A re-sit (written examinations) is only possible at the next time the course is offered.

Multiple-choice tests (work requirements) are only possible the next time the course is offered.

Students that have not passed the written examination or who wish to improve their grade must retake the exam in connection with the next scheduled examination.

Additional information