



APPLIES TO ACADEMIC YEAR 2015/2016

MET 1190 Statistics

Programme

Bachelor of Science in Business (1. year)

Responsible for the course

Christian Brinch

Department

Department of Economics

Term

According to study plan

ECTS Credits

7,5

Language of instruction

Norwegian

Introduction

The use of abstract mathematical and statistical models to describe and analyze a complex reality has in many areas proved useful. In this course students are introduced to useful and well established methods that are applicable in practice.

Learning outcome

After completing the learning process described in this course description, students will:

Acquired Knowledge

Based on a thorough understanding of concepts and notions in probability and statistics, the students will understand that statistical techniques and methods are based on assumptions and requirements.

Acquired Skills

- be able to handle and analyze quantitative uncertainty and probability
- be able to model using discrete and continuous stochastic variables, and be capable in handling, analyzing and presenting data related to these with and without using computerized tools
- be able to handle the sample of a population and be capable in methods for statistical inference
- be able to select correct model and test in different situations and be able to conclude from these
- be able to compute with probabilities
- be able to estimate a simple regression model

Reflection

- On completion of the course the students will have developed a critical attitude towards results and the validity of statistical analysis.

Prerequisites

Basic skills in mathematics and statistics equivalent to admission requirements for the program.

Compulsory reading

Books:

Løvås, Gunnar G. 2013. Statistikk for universiteter og høyskoler. 3. utg. Universitetsforlaget. kap 1-7

Recommended reading

Course outline

1. Descriptive statistics
2. Stochastic experiments and stochastic variables
3. Computation with probabilities, elementary set theory
4. Discrete probability distributions
5. Continuous probability distributions
6. Inference for parameters in discrete probability distributions
7. Inference for parameters in continuous probability distributions
8. Estimation
9. Hypothesis testing

- 10. Simple linear regression
- 11. Inference in simple linear regression model
- 12. Selection of model and methods

Computer-based tools

Excel.

Learning process and workload

To each lecture there will be exercises and reading assignments. The student must gain knowledge from the material presented in the reading assignments and work through the exercises. Some of the exercises must be solved using Excel. The exam will require that the student has solved the exercises during the semester. Feedback will be given by sample solutions and presentations.

Workload for the student:

Activity	Use of hours
Lectures	54
Work with exercises (and computer-base tools)	96
Reading assignments	40
Preparation for final exam	10
Recommended use of time	200

Use of hours

The course is lectured over 54 hours.

Examination

A five hour individual exam, concludes the course.

Examination code(s)

MET 11901 - Written exam, counts 100% towards the final grade in MET 1190 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

Re-sit examination is offered every term.

Additional information