SYLLABUS

Basic Statistics 7.5 credits S0009M

Grundläggande statistik

Course syllabus admitted: Spring 2023 Sp 3 - Spring 2023 Sp 4

DECISION DATE
2022-11-07

Luleå University of Technology 971 87 Luleå, Sweden
Phone: +46 (0)920 49 10 00 • Corporate Identity: 202100-2841

LULEÅ TEKNISKA UNIVERSITET

Basic Statistics 7.5 credits S0009M

Grundläggande statistik

First cycle, S0009M

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G VG	Statistik	Statistics

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Examiner

Mohammad Ghorbani

Course Aim

After the course the student should be able to

- identify probability distributions calculate probabilities in the situations studied in the course;
- use statistical methods to analyze populations (i.e., statistical inference) through point estimation, interval estimation and hypothesis testing.
- Describe and analyze relations between two or more variables by using, e.g., by using and linear regression (simple and multiple);
- determine whether the methods dealt with in the course can be used in a given situation;
- Use software, both statistical and general, to process, analyze and present data.

Contents

The course has the following contents:

- **Descriptive statistics** : Graphical and numerical methods for summarizing data.
- **Probability theory:** basiic methods and concepts used to describe random phenomena, e.g. indepence, conditional probability and commonly used probability distributions.
- **Statistical inference:** methods for making inference about properties of statistical models or populations, including comparative situations, through point estimation, interval estimation and hypothesis testing.
- **Regression analysis:** correlation, simple linear regression, multiple linear regression

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
The course is based on the following learning activities.

- Lectures.
- Meetings where the students engage in problem solving, often in groups, under the supervision of an instructor.
- Online quizzes
- Written homework

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.
Written exam at the end of the course.

Beside the written exam, completion of the following parts are also required to pass the course.
- Completion of compulsory assignments
- Completion of online quizes

Overlap

The course S0009M is equal to S0005M

Literature. Valid from Spring 2022 Sp 3

The Practice of Statistics for Business and Economics, av Alwan, Craig, McCabe; Macmillan international, ed 5, ISBN: 978-1-319-32481-0

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0003	Written exam	U G VG	4.5	Mandatory	A21	
0004	Compulsory assignments	U G VG	1.5	Inactive	A21	
0005	Online quizes	U G VG	1.5	Inactive	A21	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via

My LTU.

Last revised

by Niklas Lehto,Head of Undergraduate Education 2022-11-07

Syllabus established

by HUL Niklas Letho 2020-02-14

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