ML1018 Fundamental Industrial Statistics 6.0 credits

Grundläggande industriell statistik

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for ML1018 valid from Autumn 2019

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Completed course SF1625 or then equivalent.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After completed course, the student should be able to:

- solve problems within probability theory
- solve problem within statistics
- estimate probabilities with simulation
- apply some methodology for process improvement, for example
- use concepts within descriptive statistics and illustrate data in different diagrams using software
- implement a simple analysis of a time series
- implement fundamental design of experiments, for example factor analysis

Course contents

Probability theory

- Distributions and fundamental definitions and theorems.
- Reliability.

Statistics

- Descriptive statistics.
- Methodology for quality and availability.
- Point estimations.
- Assessments from insufficient (censored) data.
- Interval estimations and statistical tests.
- Regression analysis.
- Design of experiments.

Examination

- ÖVN1 - Exercises, 2.0 credits, grading scale: P, F
- TEN1 - Written Exam, 4.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.