

Statistics (E620048)

Course size *(nominal values; actual values may depend on programme)*

Credits 3.0 **Study time 90 h**

Course offerings and teaching methods in academic year 2023-2024

A (semester 2) Dutch Kortrijk lecture

Lecturers in academic year 2023-2024

Laermans, Eric TW05 lecturer-in-charge

Offered in the following programmes in 2023-2024

	crdts	offering
Bachelor of Science in Engineering Technology(main subject Machine and Production Automation)	3	A
Bachelor of Science in Industrial Design Engineering Technology	3	A

Teaching languages

Dutch

Keywords

Statistics

Position of the course

We want to give the student an overview of the elementary statistical methods used in a variety of scientific disciplines. The examples are illustrated by the use of softwarepackages like SPSS, excel and Statdisk.

Contents

- Organizing Data
- Descriptive measures
- Probability concepts
- Some distributions
- The normal distribution
- The sampling distribution of the sample mean
- Confidence intervals
- Hypothesis tests concerning one sample
- Hypothesis tests for two samples
- Chi-square tests
- Regression, correlation and inferences, one predictor
- One-way Anova

Initial competences

This course needs some final competences of "Wiskunde I" and "Wiskunde II"

Final competences

- 1 To be able to calculate the mean, variance,... for individual data, for grouped data as well as for a given distribution function. (C_Stat 1)
- 2 To have the knowledge of the important distribution functions and to be able to use the statistical tables correctly (C_Stat 2)
- 3 To be able to select the adequate method and to use the right formula concerning confidence intervals, prediction intervals and tests of hypothesis of all kinds (C_Stat 3)
- 4 Knowing to interpret the results of several statistical packages (C_Stat 4)
- 5 To be able to use the scientific terminology in general and that of statistics in particular in Dutch and in English (C_Stat 5)

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Lecture

Learning materials and price

- Introductory Statistics, Neil A. Weiss, Pearson or a similar book covering the enumerated topics
 - Extras: in the powerpoints
 - The powerpoints from the classes will be available on the electronic learning platform
- Additional documents and data files will also be available on the electronic learning platform

References

Introductory Statistics, Neil A. Weiss, Pearson

Course content-related study coaching

On demand.

Assessment moments

end-of-term assessment

Examination methods in case of periodic assessment during the first examination period

Written assessment with open-ended questions, Written assessment open-book

Examination methods in case of periodic assessment during the second examination period

Written assessment with open-ended questions, Written assessment open-book

Examination methods in case of permanent assessment**Possibilities of retake in case of permanent assessment**

not applicable

Extra information on the examination methods

The exam is an open book exercise exam.

Calculation of the examination mark

Final mark = exam mark