Course Specifications

Valid as from the academic year 2023-2024

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	TWO5	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