

## 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
<a href="#">Bachelor of Science in Engineering Technology(main subject Machine and Production Automation)</a>	3	A
<a href="#">Bachelor of Science in Industrial Design Engineering Technology</a>	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