Course: Statistics 1 credits: 5

Course code	CTVP23STATIST1
Name	Statistics 1
Study year	2025-2026
ECTS credits	5
Language	Dutch, with parts in English
Coordinator	M.E.F. Apol
Modes of delivery	Lecture Practical / Training Project-based learning Tutorial
Assessments	Project - Other assessment Statistiek 1 Theorie - Computer, organised by STAD examinations

Learning outcomes

The Statistics 1 curriculum component covers the following sections of the Chemical Engineering BOKS:

Knowledge:

Statistics and Mathematics: Reliability of measurements, Data processing and data analysis (statistical tests, statistical software)

Skills:

Research skills and systematic problem approach: problem analysis, formulation of research questions, research planning and execution

ICT skills: use and deployment of state-of-the-art digital tools/software (data analysis and processing software)

Social and communication skills: working together, reporting and presenting (Dutch), project-based work

This module has the following learning outcomes:

You apply concepts from descriptive statistics, then interpret these concepts and visualize them in writing in the chemical-technological context.

You perform null hypothesis tests on (multiple) experimental means, variances and proportions.

You calculate and interpret an appropriate effect strength for each null hypothesis test.

You express the results of statistical analyses in an understandable way and give advice based on these analyses.

You carry out statistical analyses using appropriate software (e.g. Excel).

You communicate in writing according to the given guidelines (poster instruction) in Dutch about a simple experiment/professional task.

DAS competencies

Competency	Level (I-IV)
Research	1
Experimentation	1
Development	
Management	
Advise	1

Content

In this module, various statistical analysis techniques are introduced to determine and interpret the significance and effect strength of differences between experimentally measured means and/or proportions. Attention is also paid to visualising experimental data. The analyses and visualisations are performed in Excel. During the practical course, students work in pairs to set up, carry out and elaborate their own research. The results are presented with a poster.

Instruction	1
Leadership	
Self-management	

Included in programme(s)

Chemical Engineering

School(s)

Institute for Life Science & Technology

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