

Course: Process Equipment 2

credits: 5

Course code CTVH24APPARAT2
Name Process Equipment 2
Study year 2026-2027
ECTS credits 5
Language Dutch, with parts in English
Coordinator G. Lammers

Modes of delivery Assignment
 Lecture
 Practical / Training
 Tutorial

Assessments Proces Apparatuur 2 Practicum - Other assessment
 Proces Apparatuur 2 Theorie - Written, organised by STAD examinations

Learning outcomes

This module has the following learning outcomes:

You perform the engineering of gas cleaning systems based on filtration and electrostatic separation.

You perform the engineering of settling tanks and centrifuges for liquid-solid separation.

You master essential concepts in solid-state processing, namely: 1.) segregation 2.) particle size distribution and 3.) flowability. In doing so, you perform experiments to analyse the flow from a silo and measure the mixing of solids. You relate the obtained experimental results to the concepts of segregation, particle size distribution and flowability.

You perform mixing experiments to determine mixing power and time for three impellers with and without baffles (turbine, propeller, blade agitator), calculating the power NP and comparing it with literature.

You experiment with two hydrocyclones and can measure the separation efficiency.

Content

The aim of the module is competence development in the field of engineering process equipment for mixing, gas-solid separation and liquid-solid separation. Development in this area is based on a theory module combined with performance of experiments on a semi-technical scale. The aim of the experiments is to establish links between theory and practice and application of the results of the experiments for production-scale equipment design.

The module is part of the Process Equipment Learning Line. The module is the continuation of Process Equipment 1 in study year 1.

Included in programme(s)

Chemical Engineering

School(s)

Engineering, Life Sciences & ICT