Course: Process Control — credits: 5

Course code	CTVH24PROCESREG
Name	Process Control
Study year	2025-2026
ECTS credits	5
Language	Dutch, with parts in English
Coordinator	J.M. Meerdink
Modes of delivery	Lecture Practical / Training Tutorial
Assessments	Procesregeling Practicum - Other assessment Procesregeling Theorie - Written, organised by STAD examinations

Learning outcomes

This module has the following learning outcomes:

You can describe the components of a control loop and perform calculations on a control loop.

You can describe the operation of a control valve and an inverter and perform calculations on them.

You recognize basic characteristics of a process. You can determine the characteristics of a process/system and use these to set a controller.

You can describe the operation of different sensors (flow, temperature, pressure, level, quality) and select these sensors.

You can describe the operation of an On-Off controller and a P/PI/PID controller and apply these in a process.

You can recognise and/or apply the control aspects (codes and symbols) on a P&ID (Piping & Instrumentation Diagram).

You inform yourself through the internship information and participation in the activities during the Career Week about the internship possibilities in the Chemical Engineering programme and you can apply for an internship in the Netherlands or abroad at the company or institution of your choice.

Content

The subject of process control covers the techniques needed to obtain a good and stable regulated process or system.

The following topics are covered during various lectures:

- Basic concepts of process control and the control loop
- Corrective body: control valve and speed-controlled motor
- Basic systems and process characteristics (process characterisation)
- On-off controller and P/PI/PID controller
- Control loop gain factors
- Sensors
- Piping & Instrumentation Diagram (P&ID)

In the practical session, the knowledge acquired is applied by characterising a process and using it to set the various controllers. The controllers and their settings are analysed and evaluated.

Included in programme(s)

Chemical Engineering

School(s)

Institute for Life Science & Technology

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