

Vak: Introduction to Cyber-Physical Systems

credits: 5

Vakcode SEVM26ICPS
Naam Introduction to Cyber-Physical Systems
Studiejaar 2026-2027
ECTS credits 5
Taal Engels
Coördinator W. Da Silva Costa

Werkvormen Hoorcollege
Projectonderwijs
Toetsen Introduction to Cyber-Physical Systems -
Opdracht

Leeruitkomsten

At the end of this module the student:

- Identifies each parameter necessary for the models.
- Describes the physical system using linear and nonlinear dynamical system models.
- Designs the communication framework between the cyber- and physical world.
- Designs and builds a digital twin and optimizes the accompanying models.
- Controls the physical system with the digital twin.

Inhoud

The course covers the following topics:
linear and non-linear dynamical system models, model simulation tools, and knowledge-based systems (expert systems). In this course, the student learns how to design and build a digital twin to control a physical system with the digital twin.

Opgenomen in opleiding(en)

Smart Systems Engineering

School(s)

Engineering, Life Sciences & ICT