Course: Control systems — credits: 15

Course code	ELVB25CSYS
Name	Control systems
Study year	2025-2026
ECTS credits	15
Language	Dutch, with parts in English, English
Coordinator	T.W. Scholten

Modes of delivery	Guest lecture Practical / Training Tutorial
Assessments	Control system theory - Computer, organised by STAD examinations Design and project management - Assignment Modelling theory - Computer, organised by STAD examinations Proof of concept - Assignment

Learning outcomes

Design: The starting professional considers various solutions in order to arrive at a detailed and well-founded (electro)technical product/service/process based on the program of requirements, using appropriate design methods and taking social interests and engineering standards into account.

Management: The starting professional can professionally set up, define, implement, plan, adjust and deliver a small-scale project on time.

Content

In this module you will design a “single-input single-output” control system. You use design methodologies and research skills. In order to design this system, a simulation, prototype and test set-up are required.

The assignments are carried out in groups, involving various forms of project management, such as managing time, people, quality and finances. You present the (interim) results to your fellow students and/or lecturers using various presentation formats.

Topics covered may include various mathematical topics (e.g., ordinary differential equations, modeling and simulating dynamical systems, Laplace), programming skills, control system design tools (e.g., transfer functions, block diagrams, stability analysis, frequency response, and Bode diagrams), feedback systems, and PID controllers.

Included in programme(s)

Electrical Engineering Major Mechatronics
Electrical Engineering Major Sensors & Smart Systems
Electrical Engineering Major Energy & Power Electronics

School(s)

Institute of Engineering

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