

## Course: Control systems

credits: 15

<b>Course code</b>	ELVB23CSYS	<b>Modes of delivery</b>	Guest lecture
<b>Name</b>	Control systems		Practical / Training
<b>Study year</b>	2023-2024		Tutorial
<b>ECTS credits</b>	15	<b>Assessments</b>	Control systems - Assignment
<b>Language</b>	Dutch, with parts in English		
<b>Coordinator</b>	T.W. Scholten		

### 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 Sensor Technology  
Electrical Engineering Major Electronics  
Electrical Engineering Major Mechatronics

### School(s)

Institute of Engineering