Hanze University of Applied Sciences Groningen

Course: Automation & Control — credits: 5

Course code	WBVH18AR
Name	Automation & Control
Study year	2022-2023
ECTS credits	5
Language	English
Coordinator	H. Akkerman
Modes of delivery	Education
Assessments	Automation & Control - Assignment

Learning outcomes

The student:

- can develop, build and debug digital control programs for simple industrial installations using Boolean algebra
- analyses a simple industrial installation and develop a control logic for that according to IEC 61131-3 standard
- can explain the different levels of the automation pyramid
- uses different logical functions for the control program such as and-, or-, not-, memory-, time- and counter-functions
- can draw control diagrams and defend the design
- program PLC’s using ladder logic and sequential function chart and/or structured text language
- can make a sequential function chart program for a simple installation and/or make a simple robot program

Content

In this 5 EC-course the student learns about digital control programs for industrial installations according to the standard IEC61131-3. The student learns the fundamentals of digital electronics and programming, digital input and output devices, programming methods, ladder logic and other control diagrams. The theory will be enhanced with programming exercises at industrial plc’s and models of industrial installations and/or robots.

Included in programme(s)

Mechanical Engineering
Mechanical Engineering VWO a 3-year variant

School(s)

Institute of Engineering