Course: Digital Electronics   credits: 5

Course code	ELVP22DE	**Modes of delivery**	Problem-based learning
Name	Digital Electronics		
Study year	2023-2024	**Assessments**	Digital Electronics - Assignment
ECTS credits	5		
Language	Dutch, with parts in English		
Coordinator	J.J. Dallinga		

Learning outcomes

Designing

The student considers various solution directions to arrive at a detailed and well-founded electrical engineered product/service/process based on the program of requirements, using appropriate design methodologies and taking into account societal interests and engineering standards.

Realizing

The student realizes and validates a (prototype of) a product/service/process based on a technical design, using the appropriate materials/techniques/instruments.

Content

This course focuses on a variety of topics. Based on simulations, solutions are chosen in the digital domain, namely in TTL technology, microprocessor, or FPGA.

Furthermore, students work on designing and building a combinatoric circuit using Karnaugh maps and Boolean algebra, state machines with hardware, shift registers and counters using standard memory elements, and memory circuits with combinatoric logic.

Included in programme(s)

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

School(s)

Institute of Engineering

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