

## Course: Digital Electronics 1

credits: 2

<b>Course code</b>	ELVP19ADIG1	<b>Modes of delivery</b>	Lecture
<b>Name</b>	Digital Electronics 1		Practical / Training
<b>Study year</b>	2020-2021	<b>Assessments</b>	Digital Electronics 1 - Written, organised by STAD examinations
<b>ECTS credits</b>	2		Digital Electronics 1 LabsLabs - Skills test
<b>Language</b>	English		
<b>Coordinator</b>	P.J. Kamphuis		

### Learning outcomes

The student is able to:

- Binary, Decimal and HEX conversions. BCD coding.
- Analyze a combinatoric problem using basic digital gates.
- Design and build a combinatoric circuit using Karnaugh maps and Boolean algebra.
- Design, build and implement memory circuits with combinatoric logic.
- Analyze an existing counter build with JK- or D-Flipflops.

### Content

During this unit the student will learn about Boolean algebra, combinatory logic and state machines. This will enable the student to understand the architecture and internal operation of a CPU and its peripherals.

During the theory lessons a few practical's are performed. (Practical is not graded)

### Included in programme(s)

Electrical Engineering Major Sensor Technology  
Minor Technology to Create  
Exchange Technology to Create (autumn)

### School(s)

Institute of Engineering