

# Introduction to Digital Systems

## Student Group

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# Introduction to Digital Systems

No matter, whether you have to deal with a programmable logic controller (PLC) of a robot in the future, or if you just want to know how a mobile phone controls a display (or a microcontroller controls a light emitting diode) - the following chapters are indispensable. The knowledge gained can also be transferred to pure application programming in languages like Java or C.

## Introduction

Or: How to deal with the course?

## 0. Tools

1. [Boolean Algebra](#)  
Or:  $2B + /2B$ ?
2. [Number Systems](#)  
Or: When is  $1 + 1 = 1$ ?
3. [Combinatorial Logic](#)  
Or: A different kind of logic puzzles
4. [Realization of comb. Logic](#)  
Or: The logic behind the mensa card
5. [Storage Elements](#)  
Or: The short-term memory of a controller
6. [Sequential Logic](#)  
Or: Inside a vending machine

## Tips for the exam

1. [Tips for the exam](#)

## Insertion

1. [At the heart of a computer](#)

## continuing Links

1. [Digital](#): this tool is used for simulating digital circuits. From Github only the zipfile: Digital.zip is needed.
2. [From NAND to Tetris](#): A course starting at the same point like this course, but developing a full microcontroller, operating system and game onto it.
3. [Detailed German online script of the University of Stuttgart.](#)  
This covers a broader scope than we have in the lecture HHN in the department.
4. [Digital technology on elektroniktutor.de](#) and [INF-Schule](#):  
Here you can find further explanations of our chapters on vocational school/gymnasium level in German.

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