introduction_in_ee1

Student Group

First Name	Surname	Matrikel Nr.

Table of Contents

0. Introduction to electrical Engineering

0.0 myself

My Resume

My Resume

My Resume

My Resume

My Resume

my subjects

- Electrical Engineering and Electronics I/II
- Electronics Laboratory
  combined with Elektronik Labor
- Microcontroller Technology
  combined with Microcontrollertechnik
- Electronic Systems
  combined with Elektronische Systeme

further connections

- Projects Studies (Laborarbeit)
- Student Research Project for Bachelor
  (Bachelor-Seminararbeit)
- Bachelor-Thesis
- Student Research Project for Master
  (Master Seminararbeiten)
- Master Thesis
- Promotions-Thesis

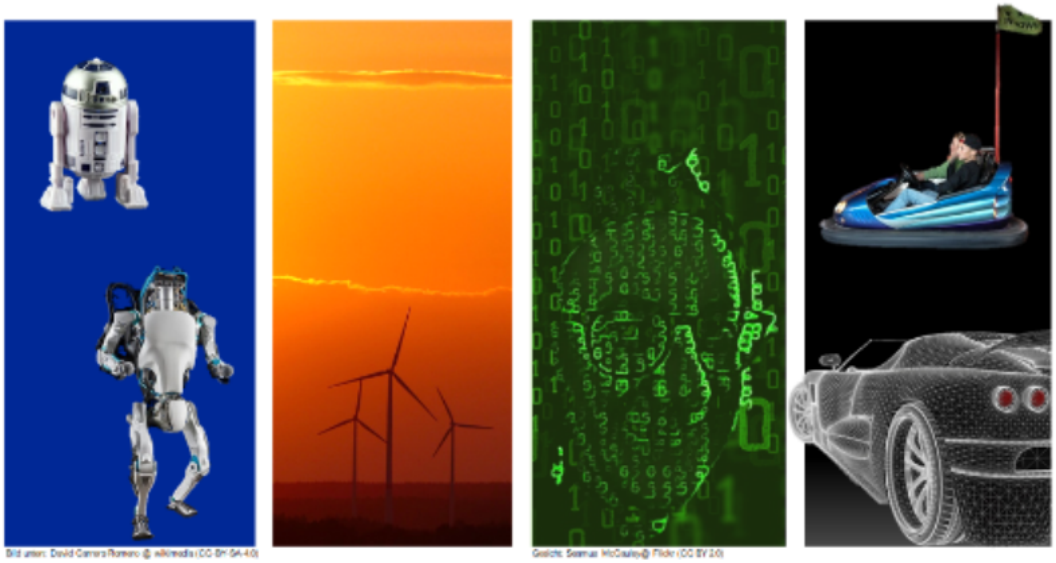
0.0 You

A glance around

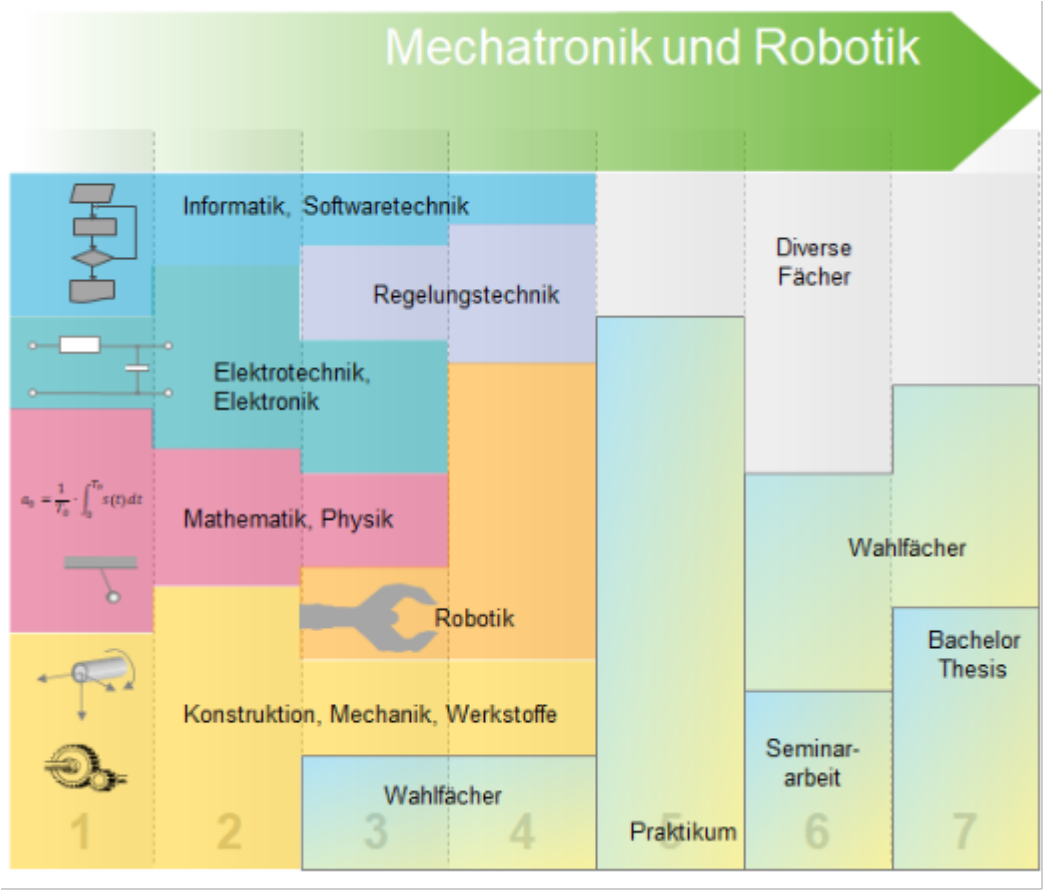
Point of Origin

0.1 What does your future look like?

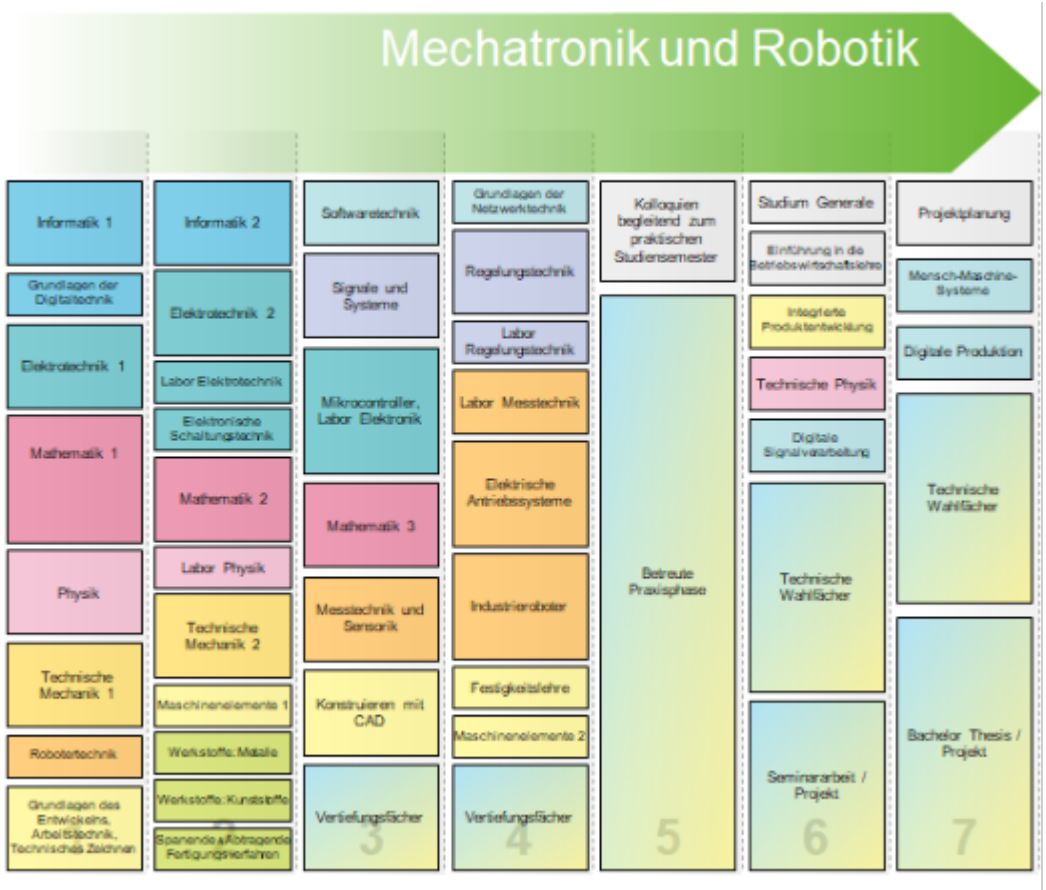
Outlook



Overview of the Lectures (MR)



Overview of the Lectures (MR)



0.2 What should you bring with you?

General

- Ability to engage with abstract issues
- Motivation to learn not only during lectures but also lecture-accompanying
- The secret of “to be able” lies in “to want”

Mathematics/Physics

- Understanding of physical problems
- Vectors
- Linear systems of equations/matrices
- Differential and integral calculus
- complex numbers

0.3 Sources for "Aftermath"

G Hagmann	**Grundlagen der Elektrotechnik**, AULA-Verlag about the same level as the course; covers ET1 and ET2 (German) can be found analog in the library Heilbronn Sontheim

V Hacker, et al	**Electrical Engineering - Fundamentals**: A great, compact textbook covering about the same range as this course. (Use University VPN to get the textbook)
F T Ulaby, et al	**Circuit Analysis and Design** is a beautifully written and illustrated textbook with the same range of topics like this course. (It is also free to download and used in many US universities.)
$\quad \quad \quad \quad \quad \quad \quad$	**Online Simulator by Falstad** It is a good idea to illustrate electrical engineering principles via simulations. A nice possibility is the Falstad Simulator. There, under the menu item “Circuits”, you can find a wide variety of setups.
	MEXLE-Wiki

0.4 Scared by the topics in the first week?

- Use the Maths Learning Centre (further down the link).

  Contrary to what you might think at first glance, you can also go there for questions about “related subjects”. There you will find students from higher semesters who can help you with homework and problems with the lecture material. They can also give you tips on how to study.

- Try to do as many exercises as possible
- Try to stick with it and study and read in a timely manner. The semester picks up quickly…
- Form study groups / join study groups.

  BUT: first try the exercise yourself and get creative, then ask fellow students!

Further information on EE1

ILIAS course

- The course for Electrical Engineering I can be found in ILIAS:
  Fakultät für Mechanik und Elektronik » Mechatronik und Robotik (Bachelor) » SPO 1 Englisches Grundstudium » Basic studies in English » (134540) Electrical Engineering »
  (134541) Electrical Engineering 1 - Prof. Dr. Tim Fischer

Tutorials

- 1 Tutor
- Discord (probably)
- Please give feedback as soon as possible

Written exam EE1

- Time: 60 minutes
- allowed aids in the exam:
  - scientific, non-programmable calculator
  - 1 double-sided sheet DIN-A4 handwritten formulary
    (or 2 one-sided sheets)

- Note: A legible and comprehensible calculation process must be available for each result.

0.6 Further information on EE2

ILIAS course

- The course for Electrical Engineering II can be found in ILIAS:
  Fakultät für Mechanik und Elektronik » Mechatronik und Robotik (Bachelor) » SPO 1 Englisches Grundstudium » Basic studies in English » (134540) Electrical Engineering »
  (134542) Electrical Engineering 2 - Prof. Dr. Tim Fischer

Written exam EE2

- Time: 120 minutes
- allowed aids in the exam:
  - scientific, non-programmable calculator
  - 2 double-sided sheets DIN-A4 handwritten formulary
    (or 4 one-sided sheets)
- Note: A legible and comprehensible calculation process must be available for each result.