



Further information

- Chapter 4 of [HH13] on HDLs can be used for projects, but not for standalone study
- Chapter 7 of [HH13] on micro-architecture depends on everything before and is thus not suitable for self-study
- Sec. 2.7 of [KR17] on Socket programming can be used for project, also in OS part; same for Wireshark labs
- Interviews in the corresponding chapters are always worth a read
- Chapters 8 and 9 are left out for the most part because they require understanding a lot of the previous material
- ¹ This can be for example ML in security: Chowdhury, M. N., K. Ferens and M. Ferens. "Network Intrusion Detection Using Machine Learning." (2016).
- ² Additionally, you can study the implementation of different logic gates or switching times of transistors to determine propagation delays: <http://ksuweb.kennesaw.edu/rbrow211/weblectures/transistors/>, <https://en.wikipedia.org/wiki/Propagationdelay>
- ³ Here, are some additional sources: <https://www.xonik.no/theory/expoconverter/expoconverter.html>, <https://www.electronics-tutorial.net/Mini-Projects/Analog-Signals-Multiplier/>, <https://www.allaboutcircuits.com/textbook/experiments/chpt-5/voltage-follower/>
- ⁴ Here some info about Schmitt triggers: <https://en.wikipedia.org/wiki/Schmitttrigger>

Legend

- The big coloured bubbles at the root of the other bubbles are the main fields of this course: operating systems, computer architecture and computer networks
- The bubbles next (grey-blue) are the areas of the corresponding field. For instance, Persistence is part of operating systems.
- The last (green) bubbles are the study topics (e.g., Data Integrity).
- To study a topic, you will have to study all indicated chapters/sections from the root to the topic. You may find data integrity under in operating systems → persistence → data integrity, and thus you have to study chapter 1-4, 35-36, 46 and 45 for this topic. Don't worry, many of these are very short! If a chapter/section is marked with an asterisk, then it is optional.
- Beware, there are some topics marked with a dagger†. These are not for the faint of heart!
- Finally, the grey links in the background indicate close relations between various topics that you can use to find other sources for reading and collaboration between groups.