Chapter 1 - Introduction and overview

Course authors (Git file)

1. Welcome
2. Course overview
3. Course components
4. The Training sessions
5. Open-source EDA for digital designs
6. AMA (Ask me anything)

Section 1

Welcome

Trainer profile

Me:

- Name, Company / Uni
- Why i’m here. My motivation.
- What i’ve done before.
- What interests me most.

Participants backgrounds and motivations

You:

Name, Company / Uni

Why i’m here. My motivation.

What i’ve done before.

What interests me most.

Section 2

Course overview

Chapter names

- 01 Introduction
- 02 Workflow
- 03 Design and example pick
- 04 OpenROAD first run
- 05 PDK Examination
- 06 Data in OpenROAD
- 07 LVS and DRC
- 08 Simulation and PPA
- 09 Scripting
- 10 GDS and Tapeout

Chapter names

- 01 Introduction
- 02 Workflow
- 03 Design and example pick
- 04 OpenROAD first run
- 05 PDK Examination

Day 1 - 2

- 06 Data in OpenROAD
- 07 LVS and DRC
- 08 Simulation and PPA
- 09 Scripting
- 10 GDS and Tapeout

Day 3 - 5

Schedule for the course

	Mon	Tue	Wed	Thu	Fri
Morning	**L1:** Intro and Overview **L2:** Workflow RTL-to-GDS	**Q1, Q2, Q3:** Recap **L4:** OpenROAD First run **T4:** Training	**Q4, Q5:** Recap **L6:** The data in OpenROAD	**Q6, Q7:** Recap **L8:** Simulation and PPA **T8:** Training	**L10:** GDS and Tapeout **Q8, Q9, Q10:** Recap
Lunchbreak					
Afternoon	**L3:** Dig. Design and examples **T3:** Training	**T4:** Training **L5:** PDK Examination **T5:** Training	**L6:** The data in OpenROAD **T6:** Training **L7:** LVS/DRC reading	**L9:** Scripting in OpenROAD	Spare time and Wrap-Up

L : Lectures

T : Training and Hands-On

Q : Questions

Section 3

Course components

Lectures

Lectures:

- All the chapters start with a lecture slide deck.
- The trainer will walk you trough the content of the lectures.
- Whenever you have a question inbetween: ask directly.
- The lectures contain the base knowledge of the course.

Trainings

Common training tasks:
Every training sessions starts with the common part. The tasks of the common part are sufficient to follow along the content of the course. If you're a beginner, these trainings should be your goal to reach.

Advanced training tasks:
The advanced training sessions are for those With pre knowledge. If the common training was finished fast or was just to easy, the advanced sessions get you convered.

Bonus training tasks:
Still time left to do some tasks? Want something to take with you as homework? Please enjoy the bonus rounds of the training sessions.

Cheat Sheets

Some things are really hard to remember:

- Abbreviations
- Complex relations and graphics
- EDA tools workflow
- Schedule of the week
- Mathematics (joking, wer’re not doing math here)
- …

- That is why we have Cheat Sheets.
- They’re made for cheating the hard parts.
- Cheatsheets work best when printed as handouts.
- You should have them nearby the computer during the course.

Questions

Questions:

- The questions are for re-visiting and remembering a previous chapter.
- They guide an interactive session between the trainer and the room:
  - Trainer: Asks the questions.
  - Room: Answers the questions.
    - Skipping a question is fine.
    - Not knowing the answer is fine.
    - This is not a test nor a challenge.
    - Think of this as a helpfull recap of yesterdays content.
  - If no answer is found, the trainer helps with the answer.

Section 4

The Training sessions

Login at IHP

Now:

- Onboarding to the computers for everyone

Levels

- Success points inbetween lectures
- This is too fast
- This is too slow

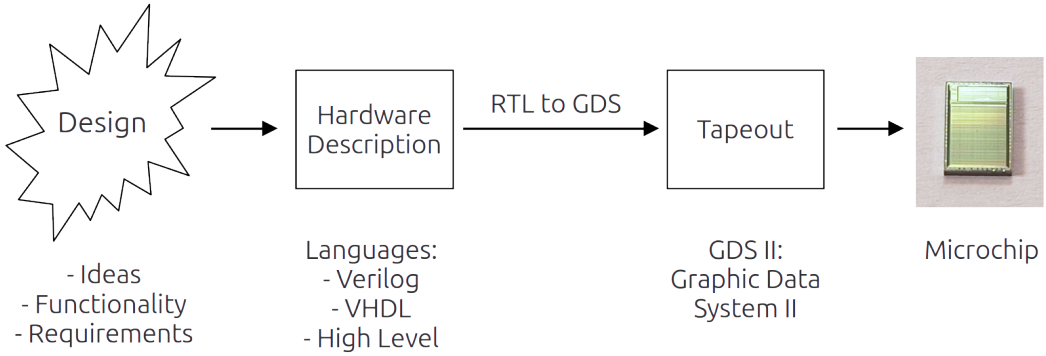
Availablitily GitHub PDF Downloads

- Follow in your own tempo. Get all the data here:
- Link / QR to the course materials

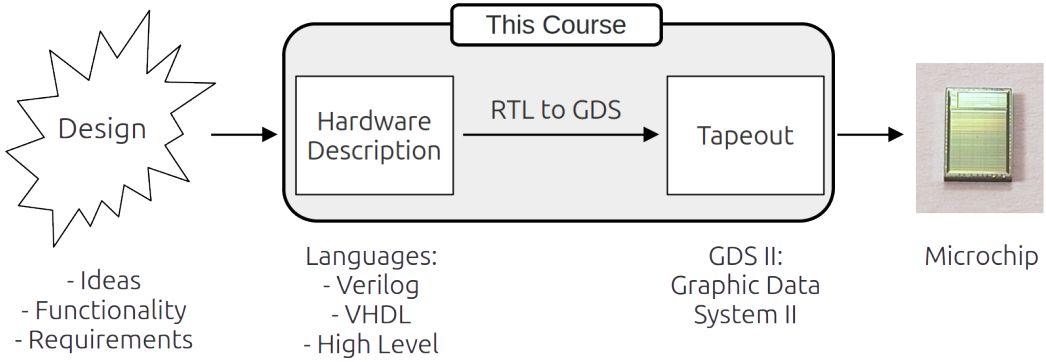
Section 5

Open-source EDA for digital designs

From Design to Microchip



RTL to GDS - Workflow



The cheatsheet

First usage of the cheatsheet:

- EDA
- RTL
- GDS II
- ....

Further topics

- What is the new thing with this course?
- Advantages of open-source in EDA
- The actual state of open-source EDA
- Goals of this course.
- How to participate and interact with this course.
- Producing chips at IHP with the open PDK

Section 6

AMA (Ask me anything)

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- Opportunity to ask questions about everything (chapter 1 ?).