

# Chapter 1 - Introduction and overview

Course authors (Git file)



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- 2 Course overview
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- 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
<b>L1:</b> Introduction	<b>Q1, Q2:</b> Recap <b>Feedback</b>	<b>Q3, Q4:</b> Recap <b>Feedback</b>	<b>Q5, Q6:</b> Recap <b>Feedback</b>	<b>Q7:</b> Recap
<b>T1:</b> Training	<b>L3:</b> Verilog  <b>T3:</b> Training	<b>L5:</b> PDK  <b>T5:</b> Training	<b>L7:</b> OpenROAD Flow scripts <b>T7:</b> Training	<b>L8:</b> Tapeout  <b>Feedback</b>
				
<b>L2:</b> OpenROAD tools	<b>L4:</b> OpenROAD first run	<b>L6:</b> OpenROAD GUI	<b>L7:</b> OpenROAD Flow scripts 2	Spare time and Wrap-Up
<b>T2:</b> Training	<b>T4:</b> Training	<b>T6:</b> Training	<b>T7:</b> Training	

**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 through the content of the lectures.
- Whenever you have a question in between: 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, we'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



# Availablity GitHub PDF Downloads

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

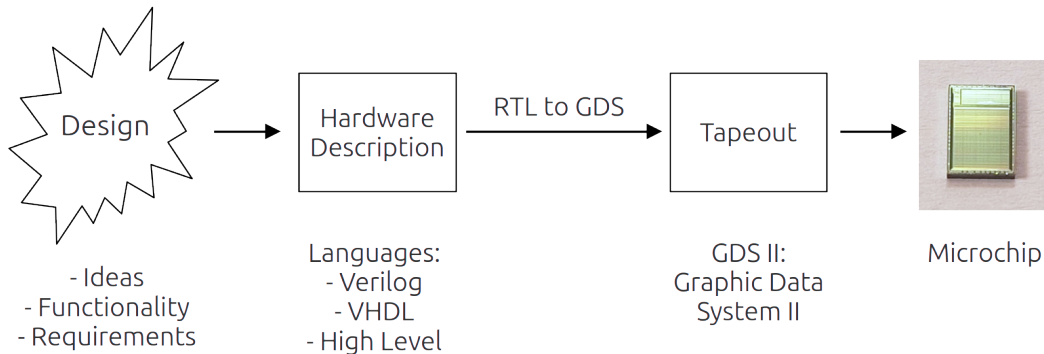


## Section 5

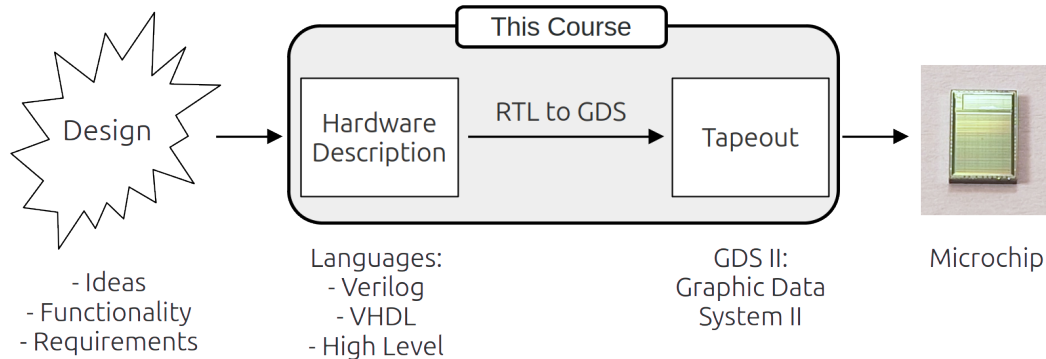
# Open-source EDA for digital designs



# 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)





# AMA (Ask me anything)

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

