



Smoothstack Candidates undertake a hands-on course that fully prepares them with the technical skills required to work on pre-silicon projects.

The course is laser-focused on fundamental pre-silicon methods, but also practical application - we empower candidates to analyze and solve real-world scenarios.



Pre-Silicon Curriculum



Digital Logic Design

- Number Systems
- Gates
- Boolean Algebra
- Kmaps
- Combinatorial and Sequential Logic
- Counters, Parallel and Serial Registers
- Finite State Machines

RTL (Register Transfer Level)

- CMOS Logic
- MicroArchitecture
- IP and SOC Design
- Clocks and Resets, Clock Trees
- Clock Skews and Clock Gating
- Data Structures
- ROM and RAM, DMA
- System Verilog

Verification

- AXI-4
- Task and Functions
- Mailbox and Semaphores
- Process Control
- Assertions, DPI, Bind
- UVM

System C

- Introduction to System C and Modeling
- Modules and Method Process
- Modules and Data Structures
- Communication and Channels
- SC_Main

Simics

- Simics Introduction
- Simics Networking
- CLI Scripting
- Object Model
- Target Scripts and Memory Maps
- Logging and Tracing
- Debugging
- Timing and Performance
- Checkpointing Images