

VLSI Course Content

Day 1:

Session 1: Presentation on Recent Trends In IC Fabrication Industry

- Introduction To VLSI
- Why We Need VLSI
- Where VLSI?
- Evolution In VLSI
- Area Of Applications
- DATA Flow in Chip Designing Process
- Introduction to Designing Of Chip
- Introduction to Verification of Chip.

Session 2: Introduction to HDL

- What Is HDL
- Need Of HDL
- Introduction To Verilog HDL
- Introduction to ModelSim
- My First Verilog Program
- Code Designing
- Design Verification and Simulation

Session 3: Project Application Explanation & Hands-On Experiments

- Modules and Ports
- Gate Level Modeling
- Data Flow Modeling
- Behavioral Modeling
- Examples
- Introduction To FPGA And ASICs
- Interfacing

Day 2:

Session 4: Introduction to Adders

- Introduction to Adders
- Theory based Example
- Implementation of Ripple adder on FPGA

Session 5: Introduction to BCD

- Introduction to BCD
- Basics of Seven Segment Decoder
- Pin Description of IC4774
- Implementation of BCD To Seven Segment Decoder On FPGA

Session 6: Introduction to Shift Register

- Introduction to Shift Register
- Few Examples
- Implementation of 8 Bit Shift Register On FPGA