

Introduction to VLSI technology



**Electro-unique Creations
Jalgaon**

What is VLSI Technology ?



- VLSI (Very large scale integration) is the current level of computer microchip miniaturization and refers to microchip containing in the hundreds of thousand transistors.
- VLSI is the process of creating an integrated circuit by combining thousands of transistors into a single chip.

Syllabus



- **Introduction** (Basic of MOSFET, Characteristics, Operation, CMOS Technology, programmable logic controller, FPGA and CPLD's, Application)(**2Hr**)
- **VHDL Programming**-The design process, basic design loop, Operator and data types of VHDL(**1Hr**)
- **Data flow description**-Structure of data flow description, Signal description and Signal assignment statement, Concurrent signal assignment statement, Constant Declaration and assignment statement, Assigning a delay to signal assignment statement. Conditional signal assignment statement (when.....else), selective signal assignment statement (with....select).(6Hr)
- **Behavioral description**-Structure of behavioral description, variable assignment statement, Sequential statement for VHDL, If statement, signal and variable assignment, Case statement, loop statement, Procedure and function statement.(6Hr)
- **Structural description**- Organization of structural design, component declaration and Installation, binding methods, example of state machine(6Hr).
- **Switch level description**-single nmos and pmos switches, nmos and pmos switch description, serial and parallel combination of switches, Switch level description of primitive gates combinational and logical circuits , cmos switch. (6Hr)



Course Fees



Sr.No	Course Name	Duration	Fees
1	Basic Level	2Hr	Free
2	Long Term course	30Hr	2000/- per student



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