



SHRIDEVI
EDUCATION

Sri Shridevi Charitable Trust (R.)

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

Sira Road, Tumkur - 572 106, Karnataka, India.

Phone: 0816 - 2212629 | Principal: 0816 - 2212627, 9686114899 | Telefax: 0816 - 2212628

Email: info@shrideviengineering.org, principal@shrideviengineering.org | Website: www.shrideviengineering.org

ESTD: 2002



(Approved by AICTE, New Delhi, Recognised by Govt. of Karnataka and Affiliated to Visvesvaraya Technological University, Belagavi)

Curriculum for FPGA based VLSI Design Course

Introduction to VLSI

- VLSI terminologies
- Design Flow-Front End & Backend

Advanced digital logic design

- Combinational & Sequential Circuits
- Timing issues in digital design
- Finite State Machines-Moore and Mealy
- Design Examples

VHDL

- Introduction to VHDL
- Data objects, data types
- Modeling of digital circuits (behavioral, dataflow, structural)
- Functions and Procedures
- Test benches
- Advanced VHDL concepts
- Coding guide lines & Synthesis issues

Field Programmable Gate Arrays

- Introduction to Programmable Devices
- FPGA Architecture and design Flow
- Introduction to FPGA devices
- Implementation details
- CLBs and Input/Output Blocks
- Luts, SLICE DFFs
- Dedicated MUXes

- Programmable Interconnects
- Architectural Resources
- Power Distribution and Configuration

Assignments

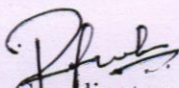
- Lab experiments on design tools, netlist, simulation
- Downloading codes on Chip board – FPGA-CPLD
- Writing applications for interfacing modules.


Assessment: Students should obtain

Min 80% of attendance

Min 80% Participation in practice session

Quiz


Coordinator


HOD
HOD
Dept of E&C
SIET, Tumkur-6


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