



**Sandip Foundation's  
Sandip Institute of Technology & Research Centre, Nashik  
Department of Electronics & Telecommunication**

---

**Date:** 24<sup>th</sup> Sep. 2015

**Name of Event:-** Three Days workshop on “VHDL & FPGA”

**Date of Event:-** 21-23 Sep. 2015

**Name of resource person:-** Prof. M. P. Mahajan, Prof. M. V. Nikumbh

**Objectives:** To make students skillful in practical, projects and for industrial jobs by improving the knowledge of various components such as Identification, Function, Testing, Pin Configuration, Ratings, and Applications.

**Contents Covered in the Workshop:**

**1)Introduction:-** The scope and application of VHDL

- Design and tool flow
- FPGAs
- The VHDL world

**2)Getting started:-** • The basic VHDL language constructs

- Entities and Architectures
- Signals and Ports
- Sequential & Concurrent assignments
- VHDL source files and libraries
- The compilation procedure
- Synchronous design and timing constraints

**3)FPGA Design Flow :-** • Simulation

- Synthesis
- Place-and-Route
- Device programming

**4)Synthesizing Combinational & Sequential Logic:**

**5) Finite state Machine design using VHDL**

**6)LCD & Keypad Interface**

**7) Practical exercises using a ALTERA DE0 & DE2 hardware board**

**Outcome: After successfully completing the workshop students will be able to**

- 1)Understand the importance , scope & application of VHDL & FPGA.
- 2)Model the digital circuit with VHDL,simulate,synthesize & prototype in PLD.
- 3)Design various application using ALTERA FPGA.

**Photos:**





