

## Short Term Courses – NIELIT

### Diploma in VLSI Design

#### Objective of the Course:

To introduce the fundamental principles of VLSI circuit design, to examine the basic building blocks of large scale digital integrated circuits and to provide hands on design experience with professional design (EDA) platforms.

#### Learning Outcomes:

After the end of the course the student will be able to design digital systems, system architectures, hardware description language required for VLSI design such as VHDL and Verilog.

#### Expected Job Roles:

VLSI Senior Engineer

**Duration of the Course (in hours)**      200 hrs

**Appr. Fees (INR):**                      Rs.16,000/-

**Minimum Eligibility Criteria and pre-requisites, if any**                      Engineering Graduates (Undergoing also)

#### Outline of Course

S. No	Topic	Minimum No. of Hours
1.	Advanced digital Design	20 hrs
2.	CMOS Circuit Design	10 hrs
3.	HDL Languages (VHDL, verilog)	20 hrs
4.	FPGA Architecture	20 hrs
5.	ASIC	10 hrs
6.	Mini project	40 hrs
<b>Theory / Lecture Hours:</b>		80 hrs
<b>Practical / Tutorial / Lecture Hours:</b>		120 hrs (including project)
<b>Total Hours:</b>		200 hrs

**Books recommended for reference and reading:**                      CMOS VLSI Design By Neil. H. Weste & David F. Harris

**Group Code:**      VLSI                      **Group Name:**      Diploma in VLSI

**Course Code:**    DP01                      **Course Name:**    Diploma in VLSI Design