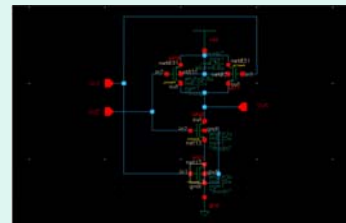
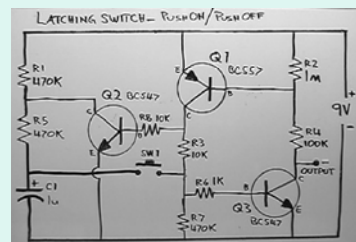
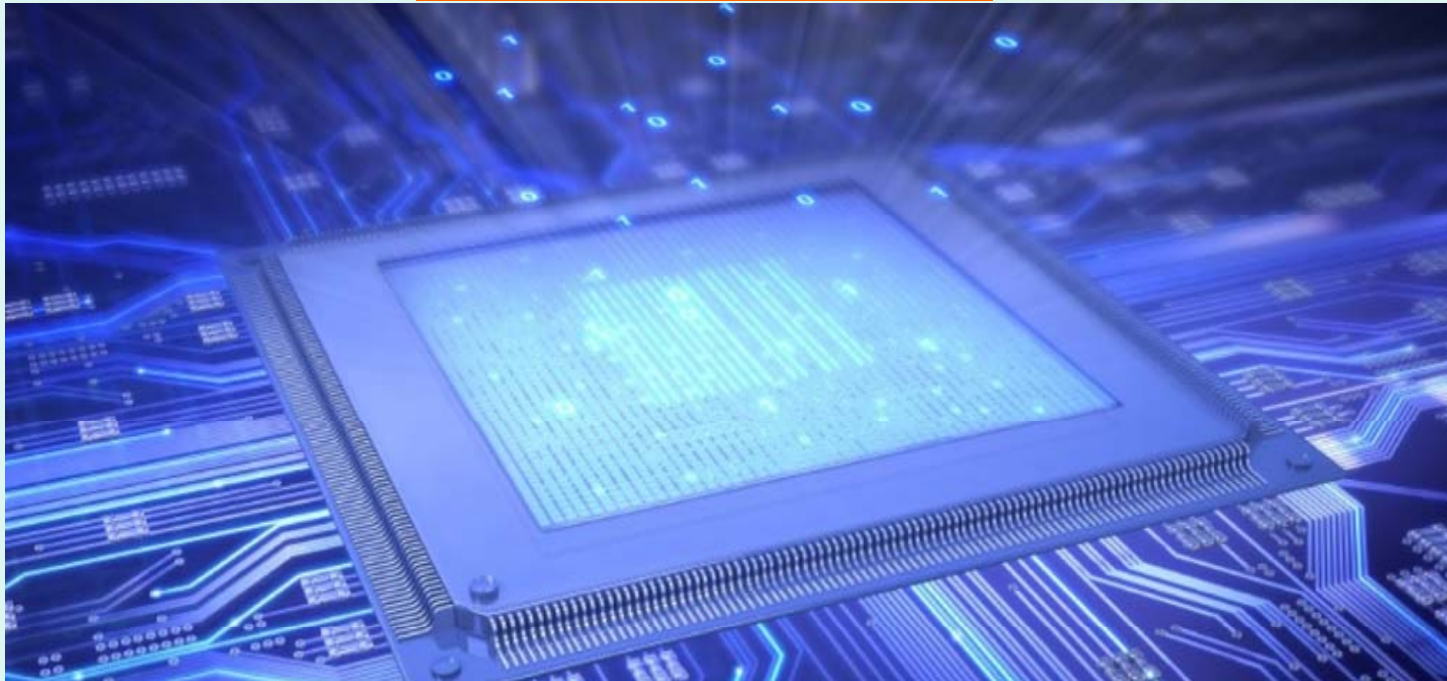


MSME-TOOL ROOM, HYDERABAD
CENTRAL INSTITUTE OF TOOL DESIGN

(An ISO 9001:2008, ISO 29990; 2010, ISO 14001:2004 & ISO 50001:2011 Certified Institution)

VES COURSES
2015-2016



10 Months - Full Time Courses

PG Diploma in VLSI & Embedded Systems (PGDVES) + M.Tech Project Work

- ◆ **Programming** : Verilog, VHDL Languages.
- ◆ **Digital Design** : Combinational & Sequential Designs, Low power VLSI Design, High speed VLSI Design.
- ◆ **Front End Design** : RTL Coding, Constraints Design, Library exploring, Synthesis.
- ◆ **Physical Design** : Design Import, Sanity checks, Floor planning, Power planning, Placement, CTS, Routing, Sign off Verification.
- ◆ **Analog Circuit Design** : Basic Designs of CMOS circuits, , Layout Design, DRC, LVS.
- ◆ **SOC Verification** : Functional Verification.
- ◆ **PROJECT WORK**

Course Fee: Rs. 55,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 84,000/- + 500/- Reg. Fee for Govt. Org. & Major industries.
Fee can be paid in 2 installments.

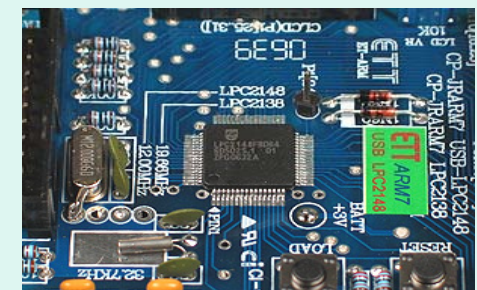
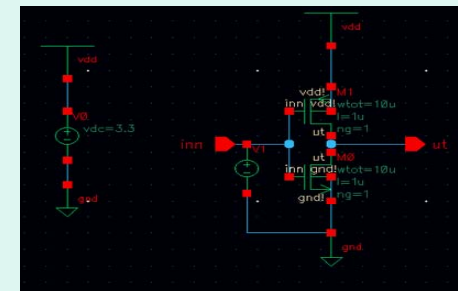
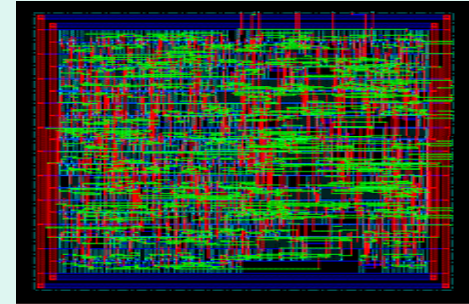
Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.

Embedded Systems

- ◆ **Introduction** : Overview of Embedded Systems, Firmware concept, Embedded Software, Embedded C Programming, Compiler
- ◆ **Microcontrollers** : 8051, AVR, PIC, ARM7.
- ◆ **Interfacing** : 5x7 Matrix display, Keypad, LCD, ADC, DAC, Sensors, RFID, GSM and GPS
- ◆ **RTOS** : Embedded Linux, Vx Works.
- ◆ **PROJECT WORK**

Course Fee: Rs. 55,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 84,000/- + 500/- Reg. Fee for Govt. Org. & Major industries.
Fee can be paid in 2 installments.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/ES/DECS/DSP Equivalent.



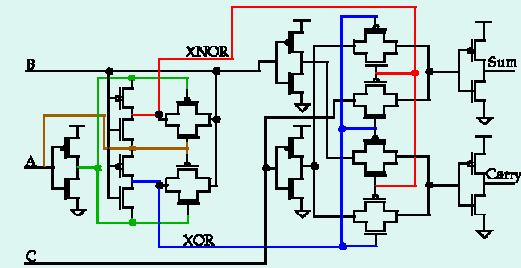
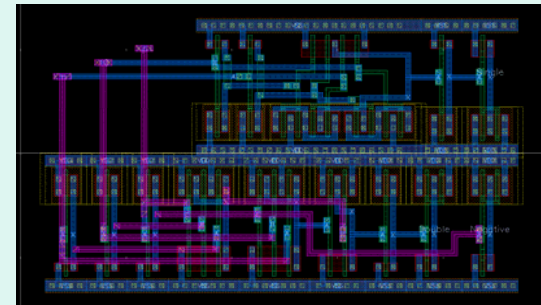
4 Months - 3hrs a day

CMOS Analog Circuit Design (CACD)

- ◆ **Basic Design of CMOS Circuits** : nMOS logic, pMOS logic, CMOS logic.
- ◆ **Schematic Design** : Virtuoso schematic editor.
- ◆ **Power Analysis in CMOS** : AC and DC power analysis for designs.
- ◆ **Layout Design** : Stick Diagrams, Layout Diagrams.

Course Fee: Rs. 24,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 53,000/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.



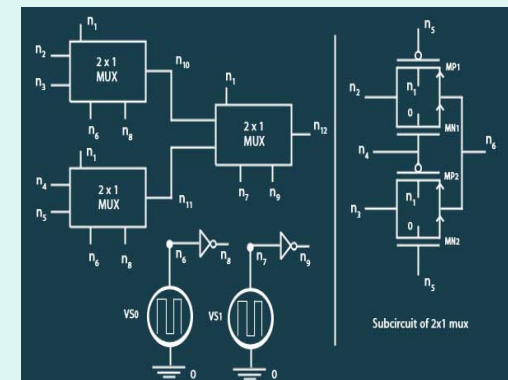
3 Months - 3hrs a day

Advanced Digital System Design

- ◆ **SOC Verification** : Functional Verification.
- ◆ **Front End Design** : RTL Coding, Constraints Design, Library exploring, Synthesis.

Course Fee: Rs. 19,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 28,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.

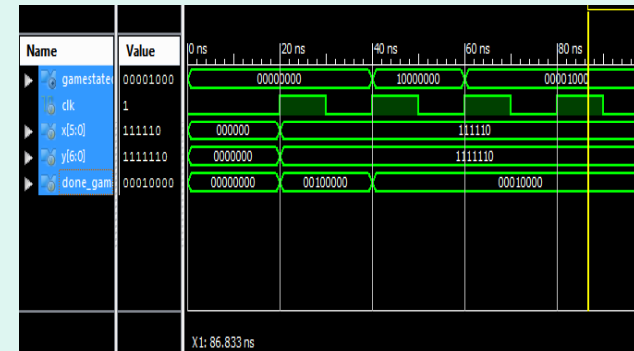


Digital Design in VLSI (DVD)

- ◆ **Digital Electronics** : Combinational and Sequential Designs.
- ◆ **Programming** : Verilog and VHDL Languages
- ◆ **Hardware** : CPLD & FPGA

**Course Fee: Rs. 19,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 28,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.**

Eligibility: Diploma/BSc ECE/EIE equivalent.

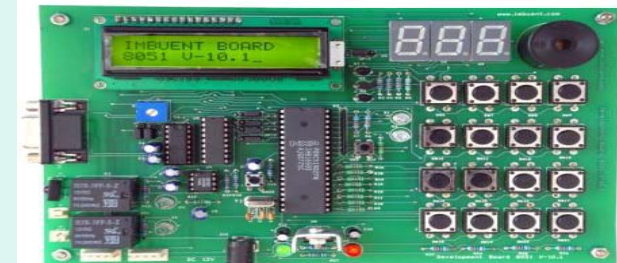
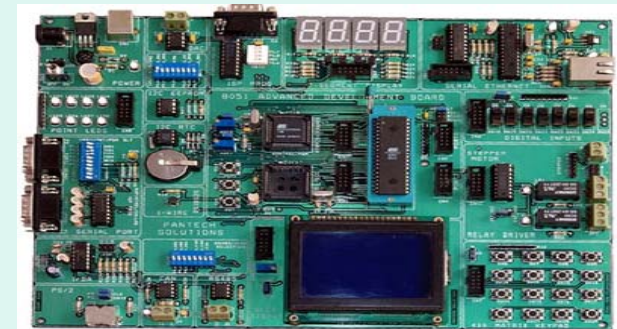


Embedded Systems

- ◆ **Introduction** : Overview of Embedded Systems, Firmware concept, Embedded Software, Embedded C Programming, Compiler
- ◆ **Microcontrollers** : 8051, AVR, PIC, ARM7.
- ◆ **Interfacing** : 5x7 Matrix display, Keypad, LCD, ADC, DAC, Sensors, RFID, GSM and GPS

**Course Fee: Rs. 19,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 28,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.**

**Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.**



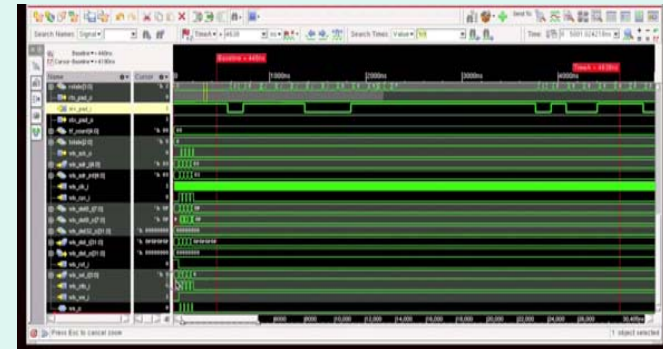
2 Months - 3hrs a day

SOC Verification

- ◆ **UVM** : UVM, Transaction level Modeling, Developing Reusable Verification Components, Using Verification Components.
- ◆ **UVM+** : The Built-In Factory and Overrides, callbacks, the Sequence Laboratory, Advance Sequence Control, UBUS Verification Component Architecture.

Course Fee: Rs. 13,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 22,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.



Verilog and VHDL

- ◆ **Verilog & VHDL Languages** : Behavioral modelling, Gate level modelling, Structural modelling.

Course Fee: Rs. 13,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 22,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.

VHDL

```
library IEEE;
use IEEE.STD_Logic_1164, all;

entity LATCH_IF_ELSEIF is
port (En1, En2, En3, A1, A2, A3: in std_logic;
      Y: out std_logic);
end entity LATCH_IF_ELSEIF;

architecture RTL of LATCH_IF_ELSEIF is
begin
process (En1, En2, En3, A1, A2, A3)
begin
if (En1 = '1') then
Y <= A1;
else if (En2 = '1') then
Y <= A2;
else if (En3 = '1') then
Y <= A3;
end if;
end process;
end architecture RTL;
```

Verilog

```
module LATCH_IF_ELSEIF (En1, En2, En3, A1, A2, A3, Y);
input En1, En2, En3, A1, A2, A3;
output Y;

reg Y;

always @(En1 or En2 or En3 or A1 or A2 or A3)
if (En1 == 1)
Y = A1;
else if (En2 == 1)
Y = A2;
else if (En3 == 1)
Y = A3;
end module
```

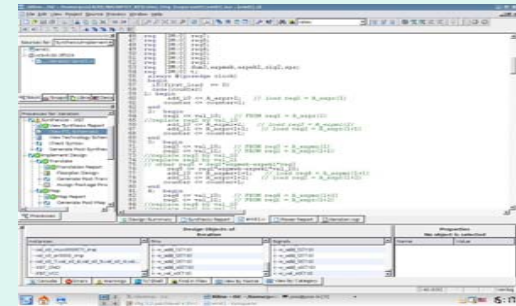
1 Month - 3hrs a day

Verilog

◆ **Verilog Language** : Behavioral modelling, Gate level modelling, Structural modelling.

Course Fee: Rs. 6,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 7,500 /- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.

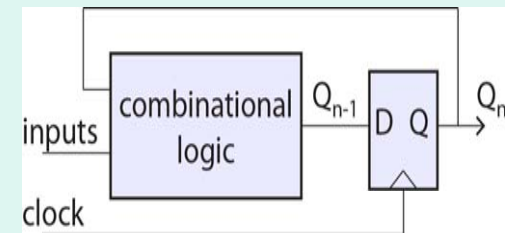


VHDL

◆ **VHDL Language** : Behavioral modelling, Gate level modelling, Structural modelling.

Course Fee: Rs. 6,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 7,500 /- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.

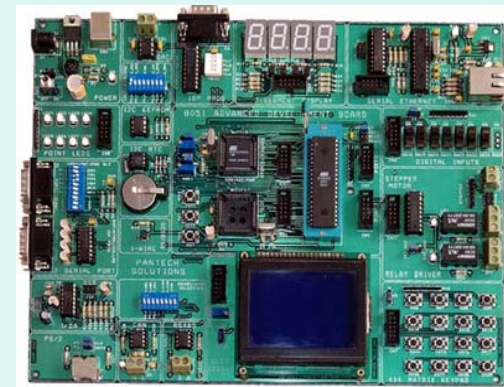


8051 MICROCONTROLLER

- ◆ Embedded C
- ◆ 8051 Architecture
- ◆ Input/output Ports and Circuits
- ◆ External Memory
- ◆ Counters
- ◆ Timers
- ◆ Serial Communication
- ◆ Interrupts

Course Fee: Rs. 6,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 7,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/B.Sc/M.Sc ECE/EIE Pursuing or equivalent.



PIC Micro Controller

- ◆ **Introduction** : Overview of Embedded Systems, Firmware concept, Embedded Software, Embedded C Programming, Compiler
- ◆ **Microcontrollers** : PIC
- ◆ **Interfacing** : 5x7 Matrix display, Keypad, LCD, ADC, DAC, Sensors, RFID,GSM and GPS

Course Fee: Rs. 6,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 7,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.

Microchip
PIC16F877A



ARM 7

- ◆ **Introduction** : Overview of Embedded Systems, Firmware concept, Embedded Software, Embedded C Programming, Compiler Register Programming
- ◆ **Microcontrollers** : ARM 7 (LPC 2148)
- ◆ **Interfacing** : 5x7 Matrix display, Keypad, LCD, ADC, DAC, Sensors.

Course Fee: Rs. 6,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 7,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.



RTOS

- ◆ Introduction to Operating Systems
- ◆ Semaphores
- ◆ Kernels
- ◆ Linux Programming Using Vx Works

Course Fee: Rs. 6,000/- + 500/- Reg. Fee for SME & Individuals,
Rs. 7,500/- + 500/- Reg. Fee for Govt. Org. & Major industries.

Eligibility: ME/M.Tech Pursuing in ECE/EIE/VLSI/ES/DECS/DSP Equivalent.
BE/B.Tech/MSc ECE/EIE equivalent.



Note:

- All the above courses will be commenced on 1st & 3rd Wednesday of every month.
- **For SC /ST Candidates fee waiver will be provided as per Govt. of Indian Norms.**

Project Works

For Diploma Projects:

Fee: Rs.13,500/- + Rs.500/- Registration Fee per participant
(Verilog, VHDI, FPGAand CPLD Programming and Practical Training in the tool
Rooms)

Duration: Six Months

(4 Months Theory and 2 Months Lab)

For B.E/B.Tech Projects:

Fee: Rs.5500/- + Rs. 500/- Registration Fee per participant
for any Two software with project.

Fee: Rs. 7500/- + Rs. 500/- Registration Fee per participant
for any Two software with project.

B.E/B-Tech Project Works Commence in December & January.

For PhD/Reserch Scholar's Projects:

Fee: Rs.16,000/- + Rs.500/- Registration Fee per participant for
utilization of our facilities (any two softwares and hardware) for
about 300 hrs without guidance from the faculty. If any
assistance is required by the participant then he/she has to
register for the respective courses by paying the fee required.