ABOUT THE COURSE

Introduction to IC Technology – MOS, PMOS, NMOS, CMOS & BiCMOS Basic Electrical Properties: Basic Electrical Properties of MOS and BiCMOS Circuits VLSI Circuit Design Processes: VLSI Design Flow, MOS Layers, Stick Diagrams, Design Rules and Layout, Transistors Layout Diagrams for NMOS and CMOS Inverters and Gates, Scaling of MOS circuits Gate Level Design: Logic Gates and Other complex gates, Switch logic. Data Path Subsystems Programmable Logic Devices: Design Approach – PLA, PAL, Standard Cells FPGAs, CPLDs. CMOS.

COURSE OBJECTIVES

The objectives of the course are to: Give exposure to different steps involved in the fabrication of ICs. Explain the electrical properties of MOS and BiCMOS devices to analyze the behavior of inverters designed with various loads. Give exposure to the design rules to be followed to draw the layout of any logic circuit. Provide design concepts to design building blocks of the data path of any system using gates. Understand basic programmable logic devices and testing of CMOS circuits.

EXPECTED OUTCOMES

The student will be able to. Acquire qualitative knowledge about the fabrication process of integrated circuits using MOS transistors. 2. Draw the layout of any logic circuit which helps to understand and estimate the parasitic effect of any logic circuit. Design building blocks of data path systems, memories, and simple logic circuits using PLA, PAL, FPGA, and CPLD. Understand different types of faults that can occur in a system and learn the concept of testing and adding extra hardware to improve the testability of the system

Resource Person:

Mr. I. Shankar Rao,

Technical Manager,

Elegant Embedded Solutions Pvt. Ltd.,

Hyderabad.

Co-ordinator:

Mr. T. Pullaiah,

Associate Professor,

Department of ECE,

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LAST DATE FOR REGISTRATION: 10TH SEPTEMBER, 2021

VIGNAN'S

INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(Sponsored by Lavu Educational Society)

Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad.

Kondapur (V), Ghatkesar (M), Medchal - Malkajgiri (D) - 501 301

ADD-ON COURSE ON

"MODERN CHIP DESIGN AND ITS APPLICATIONS"

13TH SEP TO 30TH OCT, 2021

IN ASSOCIATION WITH:

ELEGANT EMBEDDED SOLUTIONS PVT. LTD.

DURATION OF THE COURSE : **33 HRS**

VENUE: **BFF-7, B-BLOCK, VMTW**

ORGANIZED BY:

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Vignan's Institute Of Management & Technology For Women Kondapur (V), Ghatkesar (M), Medchal-Malkajgiri (Dt) Pin-501301, T.S.

PRINCIPAL

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