



## Course Name: Analog VLSI Design

### Overview:

This course will enhance the knowledge of the students in the most important aspects of Analog VLSI Technology. The course has been structured keeping in view the current development in the field of Analog VLSI design and its effect on the society. The development of the course tries to address the gap between academic course curriculum and semiconductor industry expectations.

### Participant Profile:

- Under Graduate Students of 5<sup>th</sup> Semester B.Tech. and above of ECE, AEI, EE, CSE, CS-IT, AIML branches can undertake this course.
- M.Sc. in Electronics/ M.Sc. in Physics students can undertake this course.

### Contents:

- Analogue Design Flow
- CMOS Process Technology
- Basic of Analog CMOS Design
- Introduction to Coding Styles using SPICE
- Analogue Circuit Simulation using mentor Cadence Tools.
- Stick Diagrams and Layout of Analogue Circuits using CADENCE/ Mentor Graphics Tools.

### Learning Target:

The Participants will be able to

- Identify the various steps in Analog Design flow.
- Understand and Differentiate between Digital & Analog Design Flow.
- Understand the concepts of MOSFETs and CMOS circuits.
- Design the schematic of any logic gate using CMOS circuits.
- Analyze the performance parameters and characteristics of the designed CMOS circuits.
- Understand the underlying concepts of an amplifier design
- Perform the simulation and synthesis of analog circuits using Cadence Tools

### Prerequisites:

- Digital Electronics circuits
- Basics of electronics
- Analog Electronics Circuits

### Evaluation:

- Theory & Practical Exam
- Project work based on Industrial Application.

### Teaching & Learning Media:

- Multi-media presentation
- Live project demonstration

### Time Duration:

- 36 Hours
- 6Hours/Day.

### Fee: 5500/-

- Please contact the Centre in-charge