SYNOPSYS®

MSDLab
MAYANK SHRIVASTAVA'S NANO DEVICES LAB

India Semiconductor Workforce Development Program

Learn to Design, Model, Simulate & Develop Semiconductor Devices

In Association with

Prof. Mayank Shrivastava's Nano Devices Lab (MSDLab), IISc Bangalore

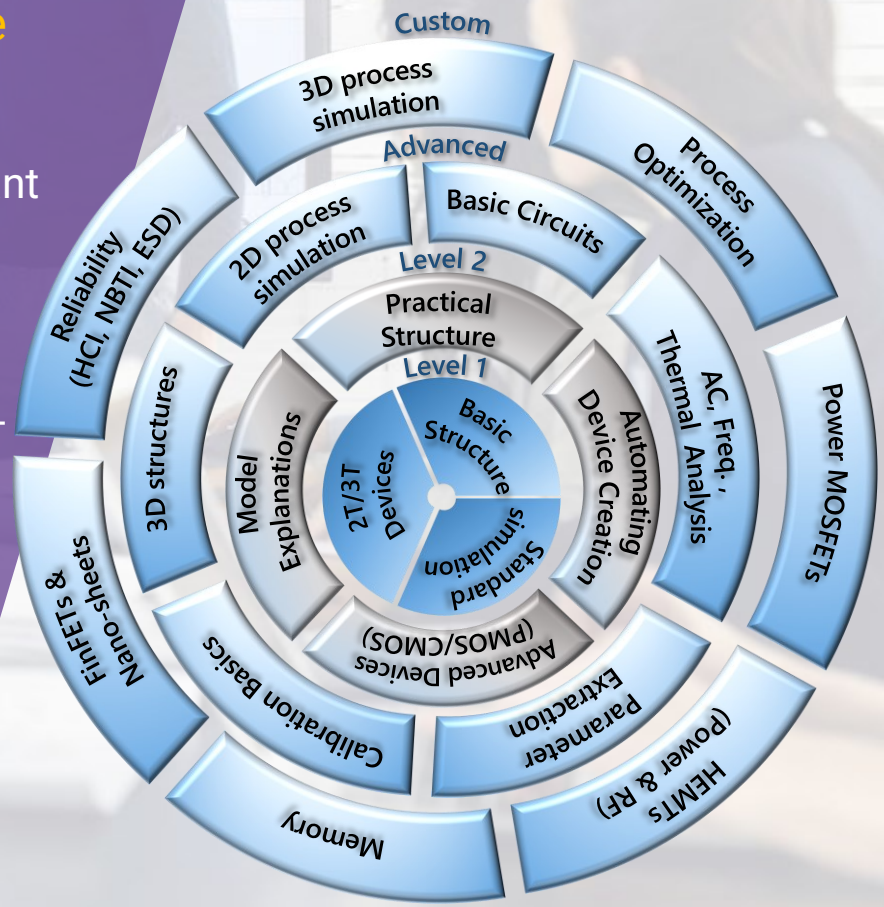
Vision:

- Fostering Next-Generation Skill Sets Among the Indian Talent to make India self-reliant in semiconductor technology development and manufacturing

About this Program:

- Well Defined Curriculum Divided into Four Levels to Cater to the Needs of Everyone – from Students & Budding Learners to Industry Professionals
- Advanced 2D/3D Process And Device Simulations To Predict Real-time / Foundry Equivalent Device Behaviors And Physics
- Introduction To Calibration And Training On Large Design Of Experiments
- Covering Wide Simulation Domains, Starting From Basic DC Simulations to Advanced Frequency-dependent, RF, Breakdown, Thermal, and Advanced Reliability Simulations
- Over A Dozen Custom Modules, Which Are Often Rare Expertise

Sign Up now



Registrations: Opening Soon!

India Semiconductor Workforce Development Program

MAYANK SHRIVASTAVA'S NANO DEVICES LAB

Level-1

(*Pre-requisites:* Semiconductor Devices)

Contents:

- Basics of Technology CAD
- TCAD Tool Workflow
- Basic 2D Structure Creation
- Diode and MOSFET Simulation
- Device Analysis
- Look Inside the Device *(See how it works)*

Tools:

- Sentaurus Device Editor
- Sentaurus Device
- Sentaurus Workbench
- Sentaurus Visual

Mini. Qual.: B.Tech. 2nd Year
Duration: 1 Week (10 Hrs)
Schedule: Once Every 3 Months
Learning: Live Virtual / Demo
Participants: 1000
Fees (INR): Students: 2000 (+GST) & Industry: 20,000 (+GST)

Level-2

(*Pre-requisites:* Level-1)

Contents:

- Practical Device Structure Creation Through Scripts
- NMOS/PMOS/CMOS
- Advanced Device Simulation
- Realtime Device Analysis
- Physical Models
- Meshing Strategy
- Model Parameters

Tools:

L1 + Script Editor

Mini. Qual.: B.Tech. 3rd Year
Duration: 3 Weekends (15 Hrs)
Schedule: Once Every 3 Months
Learning: Live Virtual & Hands-On
Participants: 500
Fees (INR): Students: 3000 (+GST) & Industry: 30,000 (+GST)

Advance

(*Pre-requisites:* Level-2)

Contents:

- 2D Process Simulations
- 3D Device Simulations
- Process Development
- Mixed-mode Simulations
- Frequency Dependence, AC, and Thermal analysis
- RF Device Simulations
- Parameter Extraction
- Calibration Basics

Tools:

L1 + L2 + Sentaurus Process + Scripting in Sentaurus visual

Mini. Qual.: B.Tech
Duration: 4 Weekends (20 Hrs)
Schedule: Once Every 3 Months
Learning: Live Virtual, Hands-On & Assignments
Participants: 250
Fees (INR): Students: 5000 (+GST) & Industry: 60,000 (+GST)

Custom

(*Pre-requisites:* Advanced)

Contents: *(One of the Following)*

- 3D Process Simulations
- Reliability (HCI & NBTI)
- ESD Simulations
- Power MOSFETs
- GaN HEMTs (Power)
- GaN HEMTs (RF)
- Memory Devices
- FinFET & Nanosheet FETs
- Process Optimization Strategy

Tools:

Advance + Content Specific Custom Modules

Mini. Qual.: Industry Professional
Duration: 1 Week (30 Hrs)
Schedule: Once Every 3 Months
Learning: In-Person, Hands-On & Assignments & Project
Participants: 15 Per Module
Fees (INR): Industry: 50,000 (+GST)

Study material will be provided by MSDLab (pre-requisites for Level 1 will be provided in pre-recorded format)