Short-term Course on Semiconductor Technology & Manufacturing with Hands-on Training

Co-ordinators
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Powai, Mumbai – 400 076

Course to be conducted by *The Centre for Semiconductor Technologies (SemiX) at Indian Institute of Technology Bombay (IITB)*

In association with

3rd July to 7th July 2023

Introduction

Semiconductor technology and manufacturing have enabled many modern technological revolutions (e.g. computer, mobile, biomedical, etc.). The spectacular growth of modern electronics in recent times has been driven by continuous and rapid enhancements in manufacturing technology. As more such developments are expected to produce further technological inflections, it is essential for both practicing engineers, faculty and students to stay abreast with state-of-the-art manufacturing and future technological trends.

This course has been developed to provide a fundamental understanding of current technologies & advanced concepts in semiconductor manufacturing along with hands-on experience on equipment and processes used in IC fabrication worldwide.

Broad Objectives

The broad objectives of the course are:
- To provide basic concepts of Integrated Circuit (IC) fabrication and manufacturing
- To introduce advanced state-of-the-art logic, memory and packaging technologies
- To provide basic understanding of hardware & system technologies
- To introduce semiconductor manufacturing and yield engineering
- To provide hands-on user training on semiconductor fabrication and characterization tools

Course Content

VLSI & Semiconductor Technology
Semiconductor Processing Fundamentals
Unit Processes & Process Integration
Advanced Semiconductor Logic, Memory and Packaging Technologies
Semiconductor Equipment and Wafer Fab Manufacturing
Equipment Hardware & System Technologies
Wafer Fab and Foundry Yield Engineering
Fab Equipment Hands-on Training

Venue for Lectures and Labs

- Lectures - Victor Menezes Convention Centre (VMCC), IIT Bombay
- Lab sessions – IIT Bombay Nanofabrication Facility (IITBNF), Electrical Engineering Department, IIT Bombay

Lecture Notes

To fully realize the objectives of the course, the lecture notes/slides will be made available to the participants at the time of registration at IIT Bombay

Faculty

The teaching faculty comprises of academia and industry instructors. Renowned faculty members from IIT Bombay will deliver lectures along with industry professionals from Applied Materials and GlobalFoundries. Lab sessions will be led by experienced research staff from IITBNF and Applied Materials India

Who may benefit?

- Working Professionals in Semiconductor Industry and Startups
- Research Scientists and Technical Staff ·
- Academic Faculty and Students
- Government Officials

Accommodation

Limited accommodation is available on a first-come-first-serve basis (self-payment) in Padmavihar Guest House, IIT Bombay
– Rs 2000 per person per day (sharing)
– Rs 3000 per person per day (single occupancy)
For hostel accommodation
– Rs 300 per person per day (self-payment)
For accommodation related queries, please email at cepsemix@ee.iitb.ac.in

Registration

Fees per participant (course material, lunch, coffee/tea)
 Rs 1,07,500 /- for industry participants
 Rs 70,000 /- for government officials
 Rs 47,000 /- for faculty from academia
 Rs 47,000/- for startup engineers
 Rs 21,500/- for students
Registration link :
https://portal.iitb.ac.in/ceqipapp/courseDetails.jsp?c_id=5254

Important Dates

Last date for receipt of the registration form: 22nd June 2023
Course dates: 3rd to 7th July, 2023

Contact

For any further queries, please contact us at office.semix@iitb.ac.in   or 022-21593930

Minimum educational requirement is a Diploma or Bachelor's Degree in Science/Engineering