Short-term Course on Semiconductor Manufacturing and Technology with Hands-on training

Course Coordinators
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Indian Institute of Technology Bombay
Powai, Mumbai – 400 076

18th March to 22nd March 2024

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

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.

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

Faculty

Renowned faculty members from IIT Bombay will deliver lectures. Lab sessions will be led by experienced research staff from IITBNF

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

Accommodation

Hostel accommodation is also available on a sharing basis (300 INR/day/person)
Contact - office.semix@iitb.ac.in

Who may benefit?

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

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 end of the course

Registration

https://portal.iitb.ac.in/ceqipapp/courseDetails.jsp?c_id=5577

Fees per participant (course material, lunch, coffee/tea)
Rs 1,50,000 /- for industry participants
Rs 75,000 /- for government officials
Rs 60,000 /- for faculty from academia
Rs 60,000/- for startup engineers
Rs 25,000/- for students

Important Dates

Last date for receipt of the registration form: 6th March 2024
Course dates: 18th Mar. to 22nd Mar., 2024

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