

“Advancing Women in Tech: Hands-On Training in Semiconductor Device Technology”

This course offers hands-on experience with advanced technologies and explores current and future applications of microelectronics. With a vision to empower women by providing cutting-edge training in the design and fabrication of semiconductor devices, we aim to drive their success in the semiconductor industry and contribute to India’s technological leadership.

Continuing Education Programme (CEP)

Nov. 25 - 30, 2024

Nanoscale Research Facility

Indian Institute of Technology Delhi



Programme Objectives

Provide hands-on training on Metal Oxide Semiconductor (MOS) device fabrication and clean room protocol.



Develop comprehensive understanding of the device design and fabrication techniques.

Measurements and parameter extraction of the fabricated devices.

Eligibility:

- B. Tech/ M. Sc/ M. Tech/ Ph.D/ PDF/ Scientists' and faculty of AICTE approved institutions colleges and National laboratories
- Only for women participants**

Registration Details

Last date: 10 Nov, 2024

- PhD/Masters/B. Tech. : 15,000* INR
- Academician/Scientists : 25,000* INR
- Industry participants : 35,000* INR

*** Excluding 18% GST**

Programme coordinator:

Prof. J. P. Singh

Conveners:

Prof. Nirat Ray

Prof. Bhaskar Mitra

Contact Us

Room No. 116, Block VI
NRF, IIT Delhi, Hauz Khas,
New Delhi – 110016

Email Id : nrf.iitd.nano@gmail.com

Call us : +91 11 2659 6784



Registration Form

Open for 30 participants only (first come first serve basis)

PROGRAMME CONTENTS

1. Introduction to micro/nano electronic device, concepts, design and fabrication
2. Si wafer processing and clean room protocol
3. Process flow and mask design
4. Gate dielectric: Oxidation process and Atomic Layer Deposition (ALD)
5. Lithography: Direct writing (Mask making) and Mask aligner
6. Etching: Wet and Dry
7. Metallization: Thermal and E-beam evaporation, sputtering
8. Device characterization and analysis: Semiconductor parameter analyzer, probe station
9. Future perspectives of Microelectronics devices

PROGRAMME SCHEDULE

Duration	:	Nov. 25th – 30th, 2024
Course Orientation	:	Nov. 25th, 2024
Mode of Sessions	:	Physical Sessions (In Person only)
Timings	:	9.30 am to 5.00 pm

EXPERTS

- Prof. Samaresh Das, Centre for Applied Research in Electronics, IIT Delhi
- Prof. Pushparaj Singh, Centre for Applied Research in Electronics, IIT Delhi
- Prof. Rajendra Singh, Department of Physics, IIT Delhi
- Prof. Dhiman Mallick, Department of Electrical Engineering, IIT Delhi
- Prof. Bhaskar Mitra, Department of Electrical Engineering, IIT Delhi
- Prof. Madhusudan Singh Department of Electrical Engineering, IIT Delhi
- Prof. Nirat Ray, Department of Materials Science and Engineering, IIT Delhi

For Registration
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PROGRAMME CERTIFICATE

- Achievement of a certificate requires a minimum of 50% in the evaluation elements and consistent attendance of 75% in lectures and laboratory
- Maximize your learning journey by actively participating in the sessions. Your dedication is encouraged for an enriched learning experience
- The organizing department of this programme is Nanoscale Research Facility (NRF), IIT Delhi
- Only an e-certificate will be provided, and it will be issued by CEP, IIT Delhi

		Indian Institute of Technology Delhi HAUZ KHAS, NEW DELHI- 110016	Programme Code:	
Department/Centre/School of				
Continuing Education Programme				
On				
Title of the Programme				
This is to certify that				
Mr./Ms. <u> Name Of The Participant </u>				
has attended the certificate programme on "Title of the Programme" held from to by the Indian Institute of Technology Delhi.				
Prof. Programme Coordinator		Prof. Head of the Department		Prof. Head/Associate Head, QIP/CEP
				

REGISTRATION DETAILS

Please email a scanned copy of your duly filled registration form along with the transaction details to email nrf.iitd.nano@gmail.com & cepaccounts@admin.iitd.ac.in

The Participation fees for the CEP programmes will be accepted only THROUGH SBI COLLECT USING FOLLOWING STEPS

Step 1: Enter IITD in the Search Bar

Step 2: Select IITD CEP Account

Step 3: Select the payment category "XXXX"

OR

Step 1: Click on Education Institute

Step 2: Select IITD CEP Account as the Name of the Institute

Step3: Select the payment category "XXXXXX"

Accommodation for participants will be provided in the campus hostel IIT Delhi with basic facilities on chargeable basis

ABOUT NRF, IIT DELHI

Nanoscale research facility comprises class 100/1000 clean rooms with several state of the art fabrication/thin film deposition instruments and characterization laboratories facilities. The research program of the NRF has been focused on both thematic areas of national importance and basic research with significance to the development of Nanoscience and Nanotechnology. More than 50 faculty members from various Departments /Centres of IIT Delhi are participating in cutting edge research at Nanoscale Research Facility. For more details, please visit: <https://nano.iitd.ac.in/>

ABOUT CONTINUING EDUCATION PROGRAMME (CEP)

Executive education is a vital need for the companies to build a culture that promotes newer technologies and solutions and builds a workforce that stays abreast of the rapidly transforming needs to the technological, business and regulatory landscape.

Committed to the cause of making quality education accessible to all, IIT Delhi has launched Online Certificate Programmes under eVIDYA@IITD (ई-विद्या@IITD): enabling Virtual & Interactive-learning for Driving Youth Advancement@IITD for Indian as well as international participants. These outreach programmes offered by the Indian Institute of Technology Delhi (IIT Delhi) are designed to cater to the training and development needs of various organizations, industries, society and individual participants at national and international level with a vision to empower thousands of young learners by imparting high-quality Online Certificate Programmes in cutting- edge areas for their career advancement in different domains of engineering, technology, science, humanities and management. For more details, please visit:

<http://cepqip.iitd.ac.in>

For any query please write to CEP, the programme coordinator at nrf.iitd.nano@gmail.com.

COMMUNICATION ADDRESS

Nanoscale Research Facility (NRF)
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