

ABOUT THE INSTITUTE

Delhi Technological University (formerly known as Delhi College of Engineering) located in Delhi is a premier institution of Engineering and Technology in India. The university plays a key role in the national and global knowledge network, empowering India with the wings of knowledge and innovation. The university aims to imbibe a culture of methodical research and to develop a scientific temper for the integration of science, engineering, and management. DTU has been ranked amongst the top institutions in multiple reputed national and international surveys.

ABOUT THE DEPARTMENT

Delhi Technological University has recently established the Vinod Dham Centre of Excellence For Semiconductors and Microelectronics (VDCoE4SM) in May 2023 with a focus on imparting training & research in thrust areas of Semiconductor Technology and IC Manufacturing; and to provide a platform to boost productivity, address emerging skill gaps and align training & research with industry needs. Thus, in order to support the Government's India Semiconductor Mission and create a skilled manpower for Semiconductor Chips and manufacturing industry, the Centre has been established with a vision to stimulate and create a robust R & D ecosystem that drives innovation, IP and start-ups in Semiconductor Technology and Microelectronics to cater to the Nation's scientific demands; and serve as a Centre of National and Strategic importance.

OBJECTIVE OF THE FDP

Semiconductor Technology and modern chip design play a vital role in developing various electronic devices ranging from smartphones and computers to medical

equipment, sensors and, automotive systems, etc. Design, and development of Modern ICs need the knowledge and skills in the rapidly evolving field of circuit design, semiconductor design, and manufacturing. This FDP would likely provide faculty members, research scholars, and postgraduate students deep insight into the latest trends, advancements, and challenges related to emerging nanoscale semiconductor devices, advanced semiconductor sensors, and cutting-edge IC design technology and methodologies. In addition, this program aims to equip the participants with hands-on experience in the state-of-the-art tools for the design, analysis, and investigation of high-performance nanoscale semiconductor devices and circuits, which support analog and digital IC design.

OUTCOME OF THE FDP

FDP plays a crucial role by helping the India Semiconductor Mission (ISM) to educate and foster workforce development in semiconductor design, fabrication, sensors design, and modern IC design. FDP empowers participants with the latest knowledge, design tools, and techniques in these fields. FDP also opens up the path for research opportunities, professional networking with peers, and institutional growth. Hands-on or practical sessions equip participants with new skills and expertise in nanoscale semiconductor devices, sensor technology, and IC design. Also, the interactions between participants with industry experts and research scientists provide deep insight into real-world applications, challenges, and opportunities. This FDP also supported initiatives of the Government of India such as Make in India, Aatmanirbhar Bharat, Skill India, Startup India, Digital India, and Vikshit Bharat.

ONE WEEK FACULTY DEVELOPMENT PROGRAM

on

“Recent Trends in Semiconductor Technology and Chip Design”

Dec 2-7, 2024

Organized by



**Vinod Dham Center of Excellence for
Semiconductors and Microelectronics**

Delhi Technological University

Delhi-110042

RESOURCE PERSONS

Faculty members from DTU DELHI, IITs, and Central Universities. Also, experts from Research Labs and Industry.

Topics to Be Covered

- ❖ Emerging and Futuristic Energy Efficient Semiconductor Devices and Technology
- ❖ Nanoelectronics devices realisation and challenges
- ❖ Analog IC Design: Current mode perspective
- ❖ CMOS Digital IC Design Technology and Techniques
- ❖ Recent Trends in Semiconductor Technology and IC Design, Modern Edge AI Computing and Devices
- ❖ Advances in CMOS Image Sensors and overview
- ❖ MEMS Inertial Sensor Technology
- ❖ Modeling and Simulation of Plasma-Assisted Graphene devices
- ❖ Reliability Analysis of Electronic Circuits
- ❖ Hands-on or practical sessions on the design of emerging semiconductor devices and circuits
- ❖ Stress Management and Life Skills

ORGANIZING COMMITTEE

Chief Patron

Prof. Prateek Sharma
Vice Chancellor, DTU

Patron

Prof. Madhusudan Singh
Registrar, DTU Delhi

Coordinator

Prof. Neeta Pandey
Professor, DTU Delhi

Co-Coordinator

Dr. Sumit Kale
Asst. Professor, DTU Delhi

Organizing Members

Dr. Devanand

Dr. Sonam Rewari

Dr. Sonal Singh

Mr. Sachin Dhariwal

Mr. Akshay Mann

TARGETED PARTICIPANTS

The program is open to the faculty members of AICTE/ UGC approved Engineering/ Institutes/Universities, PhD scholars, and Post Graduate Students.

REGISTRATION DETAILS

- ✓ There are no registration fees for attending FDP.
- ✓ Total number of seats is limited to 50. A maximum of 30% of participants may register from the host institute.
- ✓ Selection will be based on first-cum-first-serve basis.
- ✓ The certificates shall be issued to those participants who have attended the programme with minimum 80% attendance and achieving at least 70% cumulated weightage of assessments including attendance, MCQ, article summary, practical sessions, industrial visit, and reflection journal.
- ✓ Registration through ATAL Portal: <https://atalacademy.aicte-india.org/login>
- ✓ For any query please contact:

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