ABOUT THE INSTITUTION

Periyar Maniammai Institute of Science & Technology (PMIST), a Deemed to be University located in Thanjavur, Tamil Nadu, was established in 1988 as Periyar Maniammai College of Technology for Women (PMCTW), the world's first engineering college exclusively for women. The institution has been instrumental in advancing technical education and research.

Spread over 114 acres, PMIST offers 37 undergraduate and 23 postgraduate programs. The campus, with its green meadows, shady trees, and serene environment, provides an ideal setting for learning and research. As the first women's engineering college, PMIST has significantly contributed to women's empowerment by providing access to higher education in Science and Technology, encouraging active participation in national and global developments.

PMIST is committed to the holistic development of students, with a special focus on supporting those from rural backgrounds, girl students, and marginalized communities. The institution is also recognized for its social outreach initiatives and strong commitment to green practices, including energy efficiency, renewable energy usage, massive tree plantations, bio-methanation plants, bamboo cultivation, rainwater harvesting, waste management, and paper recycling efforts.

ABOUT THE FDP

- The semiconductor industry in India is expected to grow significantly in the coming years, with a substantial surge in demand for skilled professionals.
- The rapid growth and evolving needs of the semiconductor industry are creating various job opportunities. The Faculty Development Programme (FDP) on "Semiconductors and Microelectronics: Pioneering Innovations and Future Applications" is being organized to provide faculty members, researchers, and industry professionals with a deep understanding of the latest advancements and future trends in semiconductors and microelectronics. The programme is designed to enhance the knowledge and teaching capabilities of the faculty, foster research collaboration, and promote innovation in these key areas of technology.

OBJECTIVES

1. To update the participants on the latest advancements in semiconductors, integrated circuits, and microelectronics, which form the backbone of modern electronic systems.
2. To provide a platform for knowledge sharing and discussion on emerging trends, challenges, and opportunities in the semiconductor industry and its applications across various sectors like telecommunications, automotive, healthcare, and consumer electronics.
3. To equip faculty members and researchers with cutting-edge teaching techniques and research methodologies that can be applied to semiconductor technology and microelectronics in academic and research settings.
4. To foster collaboration between academia and industry, promoting research and innovation in the areas of semiconductor devices, microchips, VLSI design, and nanoelectronics.

To encourage faculty to undertake interdisciplinary research projects in semiconductors and related fields, linking them with emerging technologies such as Artificial Intelligence (AI), Quantum Computing, and the Internet of Things.

KEY TOPICS TO BE COVERED

The FDP will focus on the following key areas:

- Fundamentals of Semiconductor Devices
- Microelectronics and Integrated Circuits
- Emerging Semiconductor Materials
- VLSI and Nanoelectronics
- Applications of Microelectronics in Emerging Technologies:
- Challenges in Semiconductor Industry
- Future Prospects of Semiconductors

BENEFITS OF THE FDP

Participants will gain a strong foundation in the current and future trends in semiconductor and microelectronics technology, which will enable them to impart advanced knowledge to their students and colleagues.

- The FDP will help participants identify new research avenues and explore the interdisciplinary potential of semiconductors and microelectronics in various fields of science and engineering.
- By inviting industry experts as speakers, the FDP will facilitate interaction between academia and industry, encouraging collaborative research, internships, and consultancy opportunities.
- Faculty members will learn innovative teaching techniques and pedagogical approaches to make learning more engaging, practical, and aligned with industry requirements.

EXPECTED OUTCOMES

By the end of this FDP, participants will:

1. Have a thorough understanding of the fundamentals and cutting-edge developments in semiconductors and microelectronics.

2. Be able to integrate this knowledge into their teaching, research, and academic activities.

3. Be motivated to pursue interdisciplinary research in emerging semiconductor technologies and their applications.

4. Establish stronger ties with industry professionals, leading to potential research collaborations and funding opportunities.

Specific topics, ranging from foundational concepts to cutting-edge advancements, in the area of semiconductors and microelectronics:

WHO CAN APPLY ?

Faculty members / research scholars / PG students of the AICTE approved institutions are eligible to apply for the online FDP.
No registration fee is charged for the participants.

FOR PARTICIPANTS

· Number of seats is limited to 200. Selection of participants will be on first come first served basis.
· Selected candidates will be intimated by e-mail.
· Confirmation of participants is to be made by e-mail.
· All sessions will be conducted through online platform.
· It is mandatory to attend an online test which will be conducted by the coordinator at the end of the program.
· Certificates shall be issued to those participants who have registered in ATAL portal and have attended the program with a minimum of 80% of attendance and have scored a minimum of 70% of marks in the online test.
· Feedback must be shared by participants through portal available in their login.
· **No registration fee will be charged for the participants to attend the course and to obtain certificate**

HOW TO APPLY?

Participants can register using the link of AICTE ATAL portal
https://www.aicte-india.org/atal or
https://atalacademy.aicte-india.org/signup

CONTACT DETAILS

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