

About the course

"The Chronicles of Silicon: Quest for Novel Materials and Enchanted Devices," an advanced FDP designed to explore the fascinating world of silicon technology and its pivotal role in modern electronics. This FDP delves into the historical evolution, groundbreaking advancements, and prospects of silicon-based materials and devices.

Throughout this FDP, students will embark on a journey through the critical milestones that have shaped silicon technology. We will investigate the novel materials that are revolutionizing the field and examine the cutting-edge fabrication techniques that enhance the performance of silicon devices. Emphasis will be placed on understanding the integration of compound semiconductors, nanomaterials, and innovative manufacturing processes.

Eligibility

This course is open to all faculty members and research scholars of AICTE approved engineering colleges. Certificates will be issued upon successful completion of 12 days FDP followed by an assessment.

Selection Criteria

The number of seats is limited to 50. ATAL FDPs are completely free for participants. Selection of the participants will be based on first come first serve and based on their area of research work.

Details of Registration

Registration has to be done only through <https://atalacademy.aicte-india.org/signup>

Kindly visit <https://atalacademy.aicteindia.org/FAQs> for more information.

Chief Patron

Mr. K. Hari Thiagarajan
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Dr. L. Ashok Kumar
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Professor & Head, ECE

Coordinators

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College of Engineering YEARS
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Celebrating Academic Excellence
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A Two Week Faculty Development
Programme on

**The Chronicles of Silicon:
Quest for Novel Materials
and Enchanted Devices**

November 18 - 30, 2024

Sponsored by



AICTE Training and Learning
(ATAL) Academy



Dept. of Electronics & Communication Engineering

Thiagarajar College of Engineering,
Madurai-15,
Tamilnadu, India.

AICTE Training and Learning (ATAL) Academy

The Government of India in association with AICTE launched the ATAL academy in 2018. The vision of ATAL academy is to empower faculty to achieve goals of Higher Education such as access, equity and quality.

Objectives of ATAL Academy

- To set up an academy which will plan and help in imparting quality technical education in the country.
- To support technical institutions in fostering research, innovation and entrepreneurship through training.
- To stress upon empowering technical teachers & technicians using information and communication technology.
- To utilize SWAYAM platform and other resources for the delivery of training.
- To provide a variety of opportunities for training and exchange of experiences such as workshops, orientations, learning communities, peer mentoring and other faculty development programmes.
- To support policy makers for incorporating training as per requirements.

Free Registration for all Participants

The entire programme will be conducted through offline mode. The details of the offline programme will be communicated to the selected candidates through their registered e-mail. Assessment test will also be conducted at the end of the programme. Minimum 80% attendance and 60% marks in the test are required to obtain the certificate.

About the College

Thiagarajar College of Engineering (TCE), Madurai affiliated with Anna University is one among the several educational and philanthropic institutions founded by the Philanthropist and Industrialist, Late. Shri. Karumuttu Thiagarajan Chettiar. It was established in the year 1957 and granted Autonomy in the year 1987. TCE is funded by Central, State Governments and the Management. TCE offers eight UG Programmes, fourteen PG Programmes and Doctoral Programmes in Engineering, Sciences and Architecture. TCE has recently been accredited with an 'A++' grade by NAAC.

About the Department

Department of Electronics and Communication Engineering offers a UG programme in Electronics and Communication Engineering and a PG programme on Communication Systems. The department was started in the year 1978. Both UG and PG programmes are accredited by National Board of Accreditation (NBA). The department has been awarded for the Best Industry-Linked Electronics and Communication Engineering Institute by AICTE-CII in 2014. The department has successfully conducted Faculty Development Programme (FDP) sponsored by AICTE Training and Learning (ATAL) Academy in 2023.

Topics Covered

Main theme:

- Historical Evolution and Breakthroughs in Silicon Technology
- Novel Materials for Enhanced Silicon Devices
- Cutting-edge Fabrication Techniques
- Enhanced Silicon Device Performance and Applications
- Challenges and Future Directions in Silicon Technology
- Cross-disciplinary Collaborations and Innovations

Sub theme:

- Key milestones and paradigm shifts in silicon device technology.
- Integration of compound semiconductors and nanomaterials with silicon.
- Advances in silicon-based alloys and doping techniques for improved performance.
- Role of nanotechnology in silicon device fabrication.
- Collaborations among academia, industry, and government in driving innovation.
- Case studies of successful projects and partnerships in silicon research and development.

Resource Persons

1. Dr. Sudeep Das Gupta, Professor, IIT, Roorkee
2. Dr. Balaji Srinivasan, Professor, IITM, Chennai
3. Dr. G.Lakshmi Narayanan, Professor, NIT, Trichy
4. Dr. A.Pradeepa, Senior Design Engineer, Microchip Technology, Chennai
5. Dr. C.Kalyana Sundaram, Scrum Lead : ATE Testing, Caliber Interconnect Solutions, Coimbatore
6. Dr. S.R.Sriram, Associate Professor, Anna University, CEG, Chennai
7. Dr. P.T.Vanathi, Professor, PSG College of Technology, Coimbatore
8. Dr. J.Ramesh, Professor, PSG College of Technology, Coimbatore
9. Dr. J.Ajayan, Professor, SR University, Warangal, Telangana
10. Dr. P.Vimala, Professor, Dayananda Sagar College of Engineering, Bengaluru, Karnataka
11. Dr. D.Nirmal, Professor, Karunya Institute of Technology and Sciences, Coimbatore
12. Dr. D.Kannadhasan, Professor, VIT, Vellore
13. Dr. G.Lakshmi Priya, Associate Professor, VIT, Chennai
14. Dr. S.Shiyamala, Professor, Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science and Technology, Chennai
15. Dr. S.Rajaram, Professor, Thiagarajar College of Engineering, Madurai
16. Dr. N.B.Balamurugan, Professor, Thiagarajar College of Engineering, Madurai