

## Committee

**Chief-Patron** Prof. Sivaji Bandyopadhyay  
Director, NIT Silchar

**Patrons** Dr. J. P. Mishra  
HOD, EED, NIT Silchar

### Advisory Committee

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Dean (Academic)

**Prof. S. Baishya**  
Dean (Research & Consultancy)

**Prof. Parthasarathi Choudhury**  
Dean (Faculty Welfare)

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Dr. A. Pati	Dr. Sreejith S
Dr. Risha Mal	Dr. Swapna Mansani
Dr. A. Paramane	

## Important Dates

**Last Date (Online-Registration): 22-03-2022**

**Confirmation by E-mail: 23-03-2022**

**FDP Dates: 26<sup>th</sup> to 30<sup>th</sup> March 2022**

## Registration

### Registration Fee: Nil

Number of participants is limited to 200 (on first come first serve basis).

Register Online through the below link:

<https://forms.gle/HVGW2YeEL5Buqnaa6>

## Certificate

Certificates shall be issued to those participants who have attended the program without absenteeism who and scored minimum 60% marks in the test conducted at the end of the online FDP.

## Eligibility of Participation

The faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government Sector, Industry.

## Contact Details

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## AICTE Sponsored One Week Faculty Development Program



on

## Advances in Renewable Energy and Electric Vehicles

26<sup>th</sup> to 30<sup>th</sup> March 2022

## Coordinators

**Dr. L. C. Saikia**  
**Dr. Asha Rani M. A.**  
**Dr. Amrithesh Kumar**  
**Dr. Jiwanjot Singh**

## Organized By:



**Electrical Engineering Department,  
National Institute of Technology Silchar**

## About NIT Silchar

National Institute of Technology, Silchar is one of the 31 National Institutes of Technology of India and was established in 1967 as a Regional Engineering College in Assam. In 2002, it was upgraded to the status of National Institute of Technology and was declared as Institute of National Importance under the National Institutes of Technology Act, 2007. NIT Silchar is a fully residential campus situated on the banks of river Barak and on a sprawling campus spread over 625 acres of land surrounded by scenic tea gardens on the outskirts of Silchar. NIT Silchar is a teaching and research institute which reflects in the top NIRF rankings.

## About the Department

The Department offers B.Tech. in Electrical Engineering and M.Tech. in two specializations (i) Power and Energy Systems Engineering & (ii) Control and Automation. The department also offers Ph.D in Electrical Engineering. The department is equipped with state of art laboratories to train the UG, PG and Ph. D scholars to cater research in the frontier research areas of Electrical Engineering. The faculty members are specialized in diverse fields and there is commendable research ambience in the department. Department of Electrical Engineering takes up sponsored R & D projects by various funding agencies.

## About the Course

Concern over the limited stock of conventional energy sources such as coal and other petroleum products has fuelled efforts towards the development of renewable sources of energy that have a lesser footprint on the environment. The advent of power electronics plays a significant role here in efficient extraction and feeding of clean energy from solar or wind to the grid taking care of grid stability. However, there exist concerns in the integration and control of renewable sources like PV and wind either with the conventional grid or Microgrid. Also, a prominent drift is observed in the recent years towards distributed energy systems and integration of renewable sources to the autonomous micro or nano grids which require specific power electronics capabilities for the reliable and secure operation of the power grid. Furthermore, the emergence and integration of electric vehicles with the AC/DC grid will be quiet common in the near future which also needs sophisticated control techniques. Here plays a noteworthy role by the multilevel inverters and DC-DC converters. In this context, this course is designed to address the various design, operational and control aspects of advanced power electronic interfaces associated with Renewable Energy and Electric Vehicles.

## Course Objectives

To enrich the participants with

- ✓ Advances in Renewable Energy Technology
- ✓ Advanced Control Strategies for Integrated Renewable Energy Systems
- ✓ Electric Vehicle Charging Infrastructure
- ✓ Sustainable Technologies for EV Charging

- ✓ Sustainable Technologies for Carbon Neutral Environment
- ✓ V2G techniques and protection issues in Microgrids
- ✓ High Gain Converters
- ✓ Multilevel Inverters for Renewable Power Applications
- ✓ FACTS Controllers

## Resource Persons

- ❖ Prof. Sukumar Mishra, Professor, IITDelhi
- ❖ Prof. B. K. Panigrahi, IIT Delhi
- ❖ Prof. Sanjeev S Chauhan, MANIT, Bhopal
- ❖ Dr. Zakir Rather, IIT Bombay
- ❖ Dr. Sumit Pramanick, IIT Delhi
- ❖ Dr. Srinivas Bhaskar Karanki, IIT Bhubaneswar
- ❖ Dr. Sukanta Halder, S.V. NIT Surat
- ❖ Dr. A. Karthikeyan, NIT Surathkal
- ❖ Dr. M. Chakkarapani, RGIPT
- ❖ Mr. Chandra Shekhar, Joint Director, C-DAC, Trivandrum
- ❖ Mr. A. Ajeesh, Assistant Director, C-DAC, Trivandrum
- ❖ Mrs. Subhadra, Art of Living
- ❖ Prof. Nidul Sinha, EED, NIT Silchar
- ❖ Dr. L. C. Saikia, Assoc. Professor, NIT Silchar
- ❖ Dr. Amrithesh Kumar, Assist. Professor, NIT Silchar
- ❖ Dr. Jiwanjot Singh, Assist. Professor, NIT Silchar