

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI (NITT)

The National Institute of Technology (formerly known as Regional Engineering College) Tiruchirappalli, situated in the heart of Tamil Nadu on the banks of river Cauvery, was started as a joint and co-operative venture of the Government of India and the Government of Tamil Nadu in 1964 with a view to catering the needs of man-power in technology for the country. The institute has been conferred with autonomy in financial and administrative matters to achieve rapid development. Because of this rich experience, this institution was granted Deemed University Status with the approval of the UGC/AICTE and Govt. of India in 2003 and renamed as National Institute of Technology.

National Institute of Technology Trichy is one of the 31 National Institutes of Technology established by the Government of India. The institution offers Under Graduate Courses in ten branches and Post Graduate Courses in twenty-one disciplines of Science, Engineering & Technology besides M.S. (by Research) and Ph.D. in all the departments. About 6200 students are enrolled in the institute and around 220 faculty members are employed in regular positions. NIT-T is ranked top among 31 NITs in India and is presently occupying 9th position in NIRF ranking of engineering institutes. The institute aims at benchmarking with global universities, who are in the top 200 in world rankings in terms of teaching, innovation and research, funding and internationalisation.

AICTE – TEACHING AND LEARNING ACADEMY

AICTE - All India Council for Technical Education was established in 1945 by Government of India. The organization was set up as an Apex Advisory Body to conduct survey on facilities on technical education and to promote and develop technical education in the country. National policy of Education (1986) defines AICTE as the statutory authority for planning, formulation and maintenance of norms and standards, quality assurance through accreditation, funding in priority areas, monitoring and evaluation, maintaining parity of certification and awards, and ensuring coordinated and integrated development and management of technical education in the country.

The AICTE – Teaching and Learning (ATAL) Academy aims to plan and help in imparting quality technical education in the country and to support technical institutions in fostering research, innovation and entrepreneurship through training in various emerging areas.

This academy aims at inculcating the drive for research and knowledge enhancement among the faculty members of various institutions, research scholars, PG scholars, and Industry personnel and hence the participants are expected to be from the above categories including participants from Government, Industry / Bureaucrats / Technicians / Participants from Industry etc.) and staff of host institutions.

Faculty Development Programme

On

**“Electrical Generators
and Associated Controllers in
Wind Energy Conversion System”**

28th December 2020 – 1st January 2021

Organized by



**Department of
Electrical and Electronics Engineering,
National Institute of Technology,
Tiruchirappalli**

Under the aegis of



AICTE Teaching and Learning Academy

Through Online Platform

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, NIT-T

The Department of Electrical and Electronics Engineering, NIT, Tiruchirappalli was started in the year 1964. It offers one Under-Graduate programme (B.Tech.), two Post-Graduate programmes (M.Tech. in Power Systems and Power Electronics) and also research programmes (M.S. and Ph.D.) in the various fields of Electrical and Electronics Engineering. After the institute became NIT, the department has grown not only in terms of student and faculty strength, but also in improving the laboratory facilities for the teaching and research purposes. Thus, the department has dedicated and state of the art teaching / research laboratories. The department is recognized for excellence in research (First Department in NIT-T to be accorded QIP status for Ph.D. programme), teaching and service to the profession. The faculty members have strong sense of responsibility to provide the finest possible education for both graduate and undergraduate students. The academic strength of the faculty is reflected by the alumni, many of whom are in the top echelons of industry and academia both in India and abroad.

SCOPE OF THE WORKSHOP

There is an ever increasing demand for electrical energy in our country due to the growth in industrialization and urbanization. In this context, creating an eco-friendly environment is a prime concern, whereby getting rid of the air pollution, emphasizes the need for power from renewable energy sources.

Owing to technological improvements and significant cost reductions, power generation from wind energy is nearly competitive with conventional sources. Wind energy electric conversion systems have been found to be viable in contributing significant amount of electric power, when installed in locations where adequate potential is available over most part of the year. By attending this FDP, participants will gain in-depth knowledge in fundamentals of various configurations of wind energy electric conversion systems, its operation and control.

COURSE CONTENT

The following topics will be covered in different sessions:

- Wind Energy Projects in India.
- Analysis and operation of GCIG, SEIG and DFIG.
- Operation and control of induction generator power converter system feeding (i) AC and DC grid and (ii) Isolated loads.
- Operation and control of permanent magnet alternator power converter system
- DFIG for (i) stand-alone power supplies and (ii) grid-connected operation.
- Case studies on the Hybrid operation of wind-solar-storage system.
- IoT application in renewable energy system

RESOURCE PERSONS

Faculty members from the EEE department of NIT, Tiruchirappalli will be conducting the theory and practical sessions in the FDP. Lectures by experts from other reputed institutions and R&D organization may also be arranged.

WHO CAN ATTEND?

The faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Government (Aided), Industry and staff of host institutions can attend the FDP. There is no Registration fee to attend this FDP.

COURSE DURATION

14 Online sessions in 5 days
(28th December 2020 – 1st January 2021)

Total: 25 Hours

SELECTION AND CERTIFICATION CRITERIA

Participants should be from the Electrical and Electronics Engineering discipline. Selection will be based on first-come, first-serve basis. Preference will be given to new participants i.e., those who have not attended ATAL FDP earlier. Maximum 200 participants may be allowed to attend the online FDP. The selected candidates will be notified on or before 15th December 2020.

On completion of the programme, participants will be awarded an E-Certificate of participation by respective ATAL Academy. Minimum 80% attendance and 60% marks in the test are compulsory for certification.

HOW TO APPLY?

The participant has to register through ATAL portal (<https://atalacademy.aicte-india.org/login>)

CO-ORDINATORS

Dr. N. Kumaresan,
Professor, EEE, NITT
e-mail : nkumar@nitt.edu
mobile : 9489089101

Dr. M.P. Selvan,
Associate Professor, EEE, NITT
e-mail : selvanmp@nitt.edu
mobile : 9444170638