



**NEW HORIZON**  
**COLLEGE OF ENGINEERING**



Six days AICTE sponsored  
Online Short-Term Training Program (STTP)

on

**“SMART GRID TECHNOLOGIES FOR ENERGY EFFICIENCY  
AND ACTIVE DEMAND SIDE MANAGEMENT”**

**Phase I**

**“Introduction to Smart Grid Technologies; Opportunities and  
Challenges in Future world – Case Studies”**

**7<sup>th</sup> to 12<sup>th</sup> DECEMBER 2020**

*Organized by*

**Department of**

**ELECTRICAL AND ELECTRONICS ENGINEERING**



## ABOUT THE SHORT-TERM TRAINING PROGRAM

Excessive usage of electricity in the residential sector is the main reason for frequent peak demand in India. Proper implementation of Demand-Side Management (DSM) along with the Energy-Efficient (EE) method is an efficient way to address these peak demand issues.

Smart Grid Technologies can be an efficient tool to implement DSM and EE. There are plenty of opportunities available in the public and private sectors to those who know Smart Grid Technologies. In this context, it is important to motivate faculty and industry personnel to get trained on Smart Grid Technologies. This Short-Term Training Program would act as a platform to train the trainers on Smart Grid Technologies to help the students to have successful careers in the Smart Grid industry.

### OBJECTIVE:

- To train the trainer by providing theoretical and practical skills on Energy Efficiency and Active Demand Side Management with the latest smart grid technologies.
- To create awareness among the faculty about the opportunities available for students in the Smart Grid Industry.
- To train the faculty to upgrade their skills from the conventional power system technology to multidisciplinary smart grid technology.
- To introduce “OpenDSS and SGsim” open-source simulation tools used for smart grid technology.

### EXPECTED OUTCOME AND BENEFITS TO FACULTY:

On completing the course, the faculty will be able

- To define the different components of the smart grid
- To choose appropriate smart grid technology to implement energy efficiency
- To demonstrate the active demand-side management by utilizing the smart grid technology
- To guide and teach students by providing the inputs of several smart grid technologies
- To apply the smart grid technologies on research and development frontiers

## **ABOUT THE COLLEGE:**

New Horizon College of Engineering (NHCE) is an Autonomous College affiliated to Visvesvaraya Technological University (VTU), approved by All India Council for Technical Education (AICTE) & University Grants Commission (UGC). New Horizon College of Engineering has been accredited by NAAC with 'A' GRADE & National Board of Accreditation (NBA). It is an ISO 9001:2008 certified Institution

## **ABOUT THE DEPARTMENT:**

Department of Electrical & Electronics Engineering is one of the prestigious branches of Engineering and one among the oldest departments of NHCE-Bangalore started in 2001. The Department is accredited by NAAC with 'A' Grade and accredited by NBA. The vision of EEE Department is to create contemporary Engineers, innovators and entrepreneurs to make a better nation and in turn, a better world. A critical investigation and innovation into the modern state-of-art and cutting-edge technology lead to the fact that an electrical graduate fit better in today's competitive world.

The strength of the department is highly qualified faculty members with expertise in various fields of electrical engineering, state of art laboratory facilities. The department is inclined towards bridging the gap between Industry and academia by collaborating with Multinational Companies in the field of Electrical Engineering.

Indo-French Center of Excellence in Electricity, Automation and Energy (IFCEEAE) is one such initiative evolved through "MoU" with French Ministry of National Education and Schneider Electric India Pvt. Ltd

The Department nurtures the young minds beyond the curriculum by facilitating technical clubs in promoting technical events, community development/society impact and universal value/ethics programs. Electrical & Electronics engineering students have a greater exposure and flexibility in campus placement both in core industries, IT sectors and Public Sector Units.

## **ELIGIBILITY:**

This programme is open to the faculty members of Electrical and Electronics Engineering and allied branches of Engineering, Basic Science Departments of AICTE approved Engineering Colleges.

## **REGISTRATION LINK:**

<https://forms.gle/fnKqzr8639twwYej9>

Note: Number of participants limited to 150 members. The E-certificate to be issued for active participants who complete the quizzes and feedback form for all the session

## **NEW HORIZON COLLEGE OF ENGINEERING**

Organising Coordinators

Mail ID: [nhcesmartgrid2021@gmail.com](mailto:nhcesmartgrid2021@gmail.com)

Ph: **8870411118, 8123406405**

FN (10:00 AM to 12:00 PM)



**POWER CONTROLLERS FOR WIND ENERGY CONVERSION  
SYSTEM IN SMARTGRID**

Dr. Vijayakumar K,  
Assistant Prof.,  
IIITDM Kancheepuram



**SMART IED'S AND EVOLUTION OF COMMUNICATION  
PROTOCOLS IN T&D SUBSTATIONS**

Ms. Anuradha Charugalla, Senior  
Test Engineer,  
OSI Systems



**CONTROL OF INVERTERS IN MICROGRID WITH  
DISTRIBUTED BATTERY ENERGY STORAGE**

Dr. M Kowsalya,  
Professor,  
Vellore Institute of Technology, Vellore



**POWER CONVERTERS IN SMART GRID TECHNOLOGIES**

Dr. S. Senthil Kumar  
Associate Professor  
National Institute of Technology  
Tiruchirappalli



**POWER QUALITY ENHANCEMENT WITH SHUNT  
ACTIVE POWER FILTERS**

Dr. Amit Sant, Assistant Professor,  
Pandit Deendayal Petroleum  
University, Gandhinagar



**RECENT CHALLENGES, INNOVATIONS AND  
ADVANCEMENTS IN SMART GRID TECHNOLOGY**

Dr. Balakrishna.P, Senior Lead R&D  
Engineer, GE Grid Energy,  
Hyderabad.

AN (2:00 PM to 4:00 PM)



**VOLTAGE STABILITY MONITORING AND CONTROL IN SMART GRID ARCHITECTURE THROUGH SYNCHROPHASOR MEASUREMENTS**

Dr. Mitresh Kumar Verma, Professor,  
Indian Institute of Technology, Varanasi



**SECURITY AND PRIVACY ISSUES IN SMART GRID: CYBER PHYSICAL SYSTEM APPROACH**

Dr. Sofana Reka,  
Assistant Professor Senior Grade,  
Vellore Institute of Technology, Chennai.



**SMART GRID TECHNOLOGIES: FUTURE OF INDIAN POWER SYSTEM**

Dr. Hitesh D. Mathur  
Associate Professor and Head,  
Birla Institute of Technology & Science (BITS), Pilani



**INTELLIGENT POWER CONTROL ARCHITECTURE FOR DISTRIBUTED ENERGY RESOURCES EFFECTIVE POWER MANAGEMENT**

Dr. Rajendra Kumar Pandey, Professor,  
Indian Institute of Technology, Varanasi



**SMART BUILDING ENERGY SYSTEMS**

Dr. V.S.K.V. Harish, Assistant  
Professor, Pandit Deendayal  
Petroleum University, Gandhinagar



**VIRTUAL POWER PLANT(VPP)/MICROGRID**

Dr. Debapriya Das,  
Professor  
Indian Institute of Technology- Kharagpur

## **CHIEF PATRON**

Dr. MOHAN MANGHNANI  
CHAIRMAN, NHEI, BANGALORE

## **PATRONS**

Dr. MANJUNATHA  
PRINCIPAL, NHCE, BANGALORE

Dr. GOPALAKRISHNAN K  
PROF & DEAN – R&D, NHCE

Dr. M S GANESHA PRASAD  
PROF, DEAN & HEAD  
MECHANICAL ENGINEERING

## **CONVENER/ ORGANISING SECRETARY**

Dr. MAHESH M  
PROF & HEAD  
ELECTRICAL AND ELECTRONICS ENGINEERING

## **ORGANIZING COORDINATORS**

Dr. SINGARAVELAN A

## **ORGANIZING COMMITTEE**

Mr. VINOD KUMAR S  
Mr. MOHAN B S

## **REGISTRATION**

<https://forms.gle/fnKqzr8639twwYeJ9>

## **WHATSAPP GROUP FOR UPDATES**

<https://chat.whatsapp.com/JuL9pmhQYIsILOdkiWkXQ2>