

SHORT TERM COURSE on SMART GRID TECHNOLOGY AND ITS APPLICATION -III



Sept. 10-14, 2018



Organized by:-
Department of Electrical Engineering
GB Pant Institute of Engineering & Technology
Pauri-Garhwal, Uttarakhand, 246194

About Pauri

Pauri - Garhwal is a district in Uttarakhand state of India. Its headquarter is at Pauri. The region lies majorly in Northern Himalayas by its innate charm and magnificence. Apart from the wonderful scenic beauty it is also studded with numerous temples which serve the purposes of tourism and religious pilgrimage.

The main occupation of the population is agriculture. Some large and small industrial units have been established. Besides this, joining army/paramilitary forces and teaching are the major sources of employment for the youth.

The district encompasses an area of 5230 square km and is situated at an altitude of 1650 meter, between 29°45' to 30°15' Latitude and 78°24' to 79° 23' E Longitude. The climate of Pauri Garhwal is cold in winter and pleasant in summer. In rainy season the climate is cool & full of greenery. The winter season decorates the district with beautiful snow covered valleys and mountains.

Tourism in Pauri Garhwal district comprises of a number of exploring options. The district is regarded as nature's paradise.

About Institution

G.B. Pant Institute of Engineering & Technology is an autonomous institute for higher technical education run by the state government of Uttarakhand, India. It is established in 1989 by the government of Uttar Pradesh in honor of Indian freedom fighter Bharat Ratna Govind Ballabh Pant. The institution aims at harbouring and nurturing the technical education in Uttarakhand. The vision of the institution is to serve as a pivot of excellence in providing technical education and develop leadership qualities among students. The college aims at



empowering students so that they may be able to shoulder the responsibility and carry forward the work of previous generation of technical intelligence of our beloved nation. The college provides a panoramic view of the beautiful surroundings of Himalayas. The campus is a sprawling over 169 acres of land. The institute is situated in Ghurdauri, about 11 Km from Pauri city on Pauri-Devprayag road in district of Pauri Garhwal. The climate at Pauri and college campus is pleasant for most of the year, except from mid-December to February when it becomes very cold and chilly. The nearest Airport is Jolly Grant, Dehradun. Strategic location of the campus amidst the salubrious environment and the symbiotic connections with the nature together makes it an ideal place for seriously inclined learner.

About Department

The department, since its inception in 1997, has kept itself well abreast with the ever-changing demands of the industry and the technological developments taking place across the globe. The Department provides excellent experimental facilities to the students with highly qualified faculty, guest professors, video courses and a dynamic curriculum with emphasis on emerging areas through a variety of elective courses, seminars and two semester's project. The department has identified key thrust areas for research & development which includes ELECTRICAL MACHINES & DRIVES, POWER SYSTEMS, POWER ELECTRONICS, INSTRUMENTATION & CONTROL and SOFT COMPUTING applications in Engineering. The mission of the department is to produce quality manpower equipped with human and social values for the upliftment of our nation.

Objectives

"Smart grid" generally refers to a class of technology used to bring utility electricity delivery systems into the 21st century, using computer-based remote control and automation. These systems are made possible by two-way communication technology and computer processing that has been used for decades in other industries. The rise of smart grid is a boon not only to society as a whole but to all who are involved in the electric power industry, its customers, and its many stakeholders.

The STC is intended to educate the participants about the concept of Smart Grid, the rationale for smart grid technology and its characteristics. The concept of smart grid is to add monitoring, analysis, control and communication capabilities to the national electrical delivery system to maximize the throughput of the system while reducing the energy consumption.

The STC will enhance the knowledge of the participants as to how the smart grids builds on many technologies already used by electric utilities but adds communication and control capabilities that will optimize the operation of the entire electrical grid. Smart grid is also positioned to take advantage of new technologies, such as plug in hybrid electric vehicles, various forms of distributed generation, solar energy, smart metering, lighting management systems, distribution automation and many more.

The objective of the short term training program on smart grid technologies is to integrate and optimize distributed energy resources to achieve a more efficient and reliable grid, enable active participation of consumers with more environmental constraints.

Integration of distributed energy resources and storage devices particularly Plug-in-hybrid electric vehicles with the utility grid poses significant challenges.

Course Contents

This course is slated to take up a slew of concurrent issues, including those indicated below:

- Smart Grid Networks, Micro grid and Service Management
- Grid Integration of Renewable Energy Sources
- AC & DC Transmission and Distribution Systems- Planning and Operation
- Problems and Solutions of Smart Grid
- Advanced Metering
- Communication Networks and Physical Cyber Security Systems
- Load Frequency Control in Power Systems
- Bidding Strategy Formulation in Power Systems
- Planning and Marketing Management
- Wide Area Monitoring Protection and Control
- Power Trading and Management
- Power Electronics applications in Grid System
- Power Quality issues to Grid System
- Architectures, Models, Grid Codes and Standards of Smart Grid
- Restructuring of Distribution Systems
- FACTS Technologies Transmission System
- Challenges in Feeder Interconnection of Distributed Generation
- Power Plant Optimization
- Power Plant Cooling Systems
- Intelligent Voltage Regulation Systems in Power Plant
- Intelligent Systems

Target Audience

- The program is targeted towards: academicians, industry professionals, Government Functionaries/ Administrators, consultants, researchers and students.

Resource Persons

- Resource persons will be from IIT's, NIT's and reputed industries etc.

Dates to Remember

- Date of Short Term Course: September 10 – 14, 2018
- Last date of registration: September 05, 2018

Registration Fee

- No registration fee for all participants
- Note: - Accommodation will be provided on the basis of first come-first serve.

Registration Form

Registration Form

Department of Electrical Engineering
G. B. Pant Institute of Engineering & Technology,
Ghurdauri, Pauri-Garhwal

Short Term Course On
Smart Grid Technology & its application-III (September 10
– 14, 2018)

Name (in block letters):-

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Designation: -

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Address of Applicant: -

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E-mail:

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Contact No.:-

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Academic Qualification: -

Specialization: -

Experience in Years: -

Date:

Signature of candidate

Date:

Signature of Sponsoring

Authority with seal

Organizing Comitee

Patron : Prof. M. P. S. Chauhan, Director
Chairman : Prof. V. M. Mishra, Head
Coordinator : Prof. Manoj Kumar Panda
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Organizing Committee Members:
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Mr. S.S. Rawat
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Mr. Nitish Rawat
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