



**AICTE
(ATAL)
Sponsored**



**One Week
Faculty Development Program
on
“Power System Reliability”
26th -30th Oct, 2020
(Workshop ID-443)**



Organized by



**Department of Electrical and Electronics
Engineering
National Institute of Technology Delhi**
(An autonomous Institute under the aegis of Ministry
of Education, Govt. of India)
Sector A-7, Institutional Area, Narela, Delhi-110040,
INDIA
Website: www.nitdelhi.ac.in

ABOUT THE INSTITUTE

National Institute of Technology Delhi (NITD) is one of the thirty one NIT (s) of country. The institute was established in the year 2010 by an act of parliament and has been declared as an Institute of National importance. NIT Delhi is an autonomous Institute which functions under the aegis of Ministry of Education, Government of India. It aims to provide instructions and research facilities in various disciplines of Engineering, Science and Technology, Management, and Humanities for advance learning and dissemination of knowledge. At present, in addition to research, consultancy and developmental activities, the Institute offers UG and PG (M. Tech. & Ph.D.) level courses to about 1000 students in almost all leading fields of engineering, technology.

ABOUT THE DEPARTMENT

The Electrical & Electronics Engineering (EEE) Department is a blend of teaching and research activities pertaining to advanced fields of engineering. The department is currently offering courses at both the UG and PG level with an intake of 60 and 15 respectively. The specialization of PG course is Power Electronics & Drives. The department also offers Ph.D. program in various specialization of Electrical Engineering. The department is equipped with state-of-the-art facilities to carry out research work at all levels. The research focus of the department is in the area of power electronics, power systems, renewable energy systems, control/time delay systems, etc. The department also actively involved in multi-disciplinary research activities. The department currently has following laboratories, equipped with latest equipment and software platforms, to impart state-of-the-art technical knowledge.

COURSE INTRODUCTION

The basic function of an electric power system is to satisfy the system load requirements as economically as possible and with a reasonable assurance of continuity and quality. In order to achieve the required degree of reliability, power system managers, designers, planners and operators have utilized a wide range of criteria in their respective areas of activity. Initially all of these criteria were deterministically based and many of these criteria and associated techniques are still in use today. The basic weakness of deterministic criteria is that they do not respond to nor do they reflect the probabilistic or stochastic nature of system behaviour, of customer demands, or of component failures. This programme presents a summary of basic power system reliability concepts and briefly illustrates their application in system planning and design.

COURSE OBJECTIVES

Presently there are about 900 certified system operators in India. It is now proposed to organize the learning and development activity for specialist level operators in the field of “Power System Reliability”. Ensuring reliable and secure power system is the primary responsibility of every system operator. Grid incidents have underlined the importance of grid security. As the grid grows in size and complexity, grid security has to be enhanced because the consequences of failure of a large grid are severe. Therefore Capacity Building in Reliability is essential for all personnel in the Power Sector. This is recognized as the next step forward in the continued Capability Enhancement of System Operators and an area of specific specialization. Hence, a Specialist Learning and Development Programme have been planned on “Power System Reliability”.

OBJECTIVE OF ATAL AICTE

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. ATAL is committed for development of quality technical education in the country by initiation various schemes.

COURSE CONTENT

The program is focused to discuss various aspects of Power System Reliability. Following are the topics to be covered in this program:

- ❖ Basics of Power System
- ❖ Probability Theory
- ❖ Quantitative Reliability Analysis
- ❖ Power System Reliability Analysis
- ❖ Frequency Balance Approach
- ❖ Discrete Convolution Method
- ❖ Transmission System Reliability
- ❖ Composite System Reliability
- ❖ Multi-Area Reliability
- ❖ Interconnected System Reliability
- ❖ Future Trends for Reliability Consideration: policies and R&D

RESOURCE PERSONS

Apart from NIT Delhi, resource persons are experienced faculty members from the various parts of globe in the area of Power System Reliability.

- **Prof A K Verma**, Western Norway University of Applied Sciences, Norway (Former Professor/ Senior (HAG), IIT Bombay)
- **Prof R C Bansal**, Professor, EE Dept, University of Sharjah, UAE

- **Prof Navraj Karki**, Head, Institute of Engineering (IOE), Tribhuvan University, Nepal
- **Prof Vinod K Shanwal**, Head, School of Humanities & Social Science, Gautam Buddha University, Greater Noida.

PATRON

Padmashri Prof. Satish Kumar
Director, NIT Delhi

PROGRAM COORDINATOR

Dr. Vivek Shrivastava, Associate Professor,
M: +91 8800681277, E-mail- shvivek@nitdelhi.ac.in

Dr. Manoj Kumawat, Assistant Professor,
M: + 91-9828288334, Email- manoj@nitdelhi.ac.in

REGISTRATION LINK

The registration for the workshop can be done through online link. **Batch size is limited.** Maximum of 200 candidates will be permitted to attend the FDP. The registration link on AICTE portal is as follows:

<https://atalacademy.aicte-india.org/>

There are no registration charges to attend the program. i.e. it is FREE for selected participants. **The classes will be held from 2:00 PM to 7:30 PM.**

WHO CAN ATTEND

- ❖ Program is open to faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Industry (Bureaucrats/Technicians/Participants from Industry etc.)and staff of host institutions.

Registration Form



AICTE-ATAL
Sponsored
One Week FDP



on
“Power System Reliability”

26th -30th Oct, 2020

(Workshop ID-443)

Name.....

Designation.....

Department.....

Academic Qualification.....

Research Area

Organization.....

Address.....

.....

.....

Mobile.....

E-Mail.....

Date

Accommodation needed: Yes/No

Place:

Date:

Signature of the applicant

Signature and Seal of Sponsoring Authority