

### About the Program

In the present era of smart technologies, electrical power sector has highly benefited as monitoring, supervision and control have moved towards the intelligent power delivery. High Quality power estimation, self-healing and machine to machine communication based approaches have been appreciated to achieve more reliable and secured smart grids.

In this course applications Internet of Things (IoT) environment will be addressed for classical /modern power system. Further information data transfer and processing using signal processing techniques through prediction, decision making and fast healing of unhealthy power system. Critical diagnosis, condition monitoring, control and analysis of electrical power components using Optimization techniques and Intelligent techniques (Artificial Intelligence and Machine learning).

The harmonic filtering and minimization, power factor improvement, reactive power compensation, static var compensation, and drives are based requirement of power and energy sectors. The conventional controllers as well as advanced controllers have been exploited for their efficient and effective performance Recently, Artificial Intelligence (AI) based controllers are used in harmonic filtering with higher efficiency and more dynamics in power systems.

The course is intended to cover all the traditional as well as advanced topics in energy and power sectors technology and their control including modeling and simulations.

### About the Institute

The MANIT is successfully meeting the objective of producing skilled Technocrats of the highest quality who can take up the challenges of the industries and Research organizations of the MANIT offers various undergraduate and post graduate courses and research programs. Under the peaceful and friendly environment, MANIT producing technocrats who are

resources to Nation and the world. Our bright students with excellent technical skills have always been contributed to the successes of various sections.

The total area of campus is 650 acres and protected by boundary wall and ring road. The entire campus consists of administrative and academic building, workshop, Library and community centre, Residential area accommodation for students and staff and other general amenities such as post office, Shopping complex, a School for children, dispensary, an auditorium with capacity of 1000 persons and sports complex with vast expand of open area.

### About the Department

The Department of Electrical Engineering Department was established in the year 1960. The department offers under graduation, post-graduation in Electrical Drives and in Power System and doctoral program. The department has highly qualified and competent faculty members and adequate facilities to support teaching and learning activity.

### Programme Educational Objectives of the Department

To apply specialized knowledge for solving multi-disciplinary problems in the field of Power Electronics and Electrical Drives.

To apply analytical skills to meet the challenges of evolving technology in the area of Power Electronics to meet industrial requirement.

To promote research in the promising areas of power electronics and electrical drives through projects and dissertation based on green technology, and industrial applications.

## ONLINE ONE-WEEK SHORT-TERM COURSE ON

### IoT and Intelligent Techniques for Electrical Engineering (IITEE2021)

**(20 to 24 September 2021)**

*( self - Sponsored program)*



Patron

**Prof. N.S. Raghuwanshi, Director, MANIT**

Head, Electrical Engineering

**Prof. Tripta Thakur**

Course Coordinators

**Dr. Suresh Kumar Gawre**

*(Asst. Professor, Electrical Engg, MANIT)*

**Dr. Shailendra Kumar**

*(Asst. Professor, Electrical Engg, MANIT)*

**Dr. Rishi Kumar Singh**

*(Asst. Professor, Electrical Engg, MANIT)*

Organized by

**Department of Electrical Engineering,  
Maulana Azad National Institute of  
Technology, Bhopal (M.P.) India.**

Website: [www.manit.ac.in](http://www.manit.ac.in)

### Registration and General Information.

For participation in the 'course' should fill the google form and mail at following mail address:

<https://forms.gle/wHw2JmTV5ZKh5uu67>

### Address for Communications:

**Dr. Suresh Kumar Gawre,**

E-mail: [sgawre28@gmail.com](mailto:sgawre28@gmail.com), Mo: 7869301917

**Dr. Shailendra Kumar,**

E-mail: [er.dwivedi88@gmail.com](mailto:er.dwivedi88@gmail.com), Mo: 9716379527

**Dr. Rishi Kumar Singh,**

E-mail: [rshiksingh@yahoo.com](mailto:rshiksingh@yahoo.com), Mo: 9827260938

### The last date of applications 12<sup>th</sup> Sept 2021.

The candidates would be informed of their selection through E-mail by 15<sup>rd</sup> Sept 2021.

### Course Content

- IoT application in monitoring of Electrical devices.
- IoT application in fault diagnosis in energy based microgrids
- Hand on approach for low cost IoT system design.
- Intelligent Techniques for Optimization in power and energy system.
- Machine Learning approach for smart analysis
- control algorithms for Renewal energy sources
- Latest trends in power quality and battery charging
- Switching Techniques for Parallel Connected Converters.
- Latest trends in renewable energy based

microgrids

- Power systems compensation and protection

### Who can apply:

- Faculty members working in the area of power and energy systems
- Industrial persons and Consultants.
- Research Scholars,UG and PG students.

### Speakers:

Faculty members from IITs/NITs/ Others.

### Registration Link”

<https://forms.gle/wHw2JmTV5ZKh5uu67>

## Venue

ONLINE

Over Google Meet Platform

### Course fee

|                             |            |
|-----------------------------|------------|
| Students/ Research scholars | Rs. 500/-  |
| Institute/ College Teachers | Rs. 1000/- |
| Delegates from industries   | Rs. 1500/- |

### Details for online payments

Account Name: **Director MANIT Bhopal**

Bank Name: **State Bank of India**

Bank Address: **MANIT (MACT)**

Bhopal, M.P., India

Account No : **10020150107**

IFSC Code: **SBIN0001608**

### Application Form ONE-WEEK SHORT-TERM COURSE ON

**IoT and Intelligent Techniques for Electrical  
Engineering (IITEE2021)  
( 20 - 24 September 2021)**

Name of the applicant:

\_\_\_\_\_

Address of the applicant:

\_\_\_\_\_

Gender: M/F\_\_\_\_\_

DOB:\_\_\_\_\_ Age:\_\_\_\_\_

Qualification:\_\_\_\_\_

Experience:\_\_\_\_\_

Designation:\_\_\_\_\_

Mobile:\_\_\_\_\_

Email:\_\_\_\_\_

Signature of the Applicant