

### About the Program

A power system plays an important role in economic development of any nation. A secure, reliable and economic operation of power systems is very much essential for industrialization. Therefore good planning is the back-bone for better operation of power systems which are largest man made systems on the earth. Over the years many analytical tools have been designed to help planners of power systems. Some of these tools are Power Flow programs, State estimation algorithms, Short circuit programs, Transient stability tools to name few. A good understanding is necessary for better insight in planning and operation of power systems.

**The main objective of the course is to teach participants to write generalized programs required for analysis of power systems. In addition they will be taught about modeling and simulation of FACTS device based systems.**

### About the Institute

The institute, one of the pioneering engineering institutions of the country, was established in 1961 as Sardar Vallabhbhai Regional College of Engineering & Technology and was given a status of National Institute of Technology, in 2002. At present, there are six undergraduate courses, seventeen postgraduate courses and Ph.D. programmes in all disciplines of engineering and applied sciences. It has an excellent placement record with a number of top ranking companies visiting the campus.

The institute is located at Surat, about 260 kms North of Mumbai and is very well connected by rail and road links to Mumbai as well as Ahmedabad (250 kms)/Vadodara (150 kms). The institute is approximately 10 kms away from Surat Railway Station and 10 kms from the Surat Airport (STV). Surat is the industrial city with historical importance and is well known for Textile, Jari and Diamond industries. The leading industries like RIL, ONGC, Kribhco, L&T, ESSAR, NTPC, and GAIL are established in Surat Hazira area.

### About the Department

The department is one of the pioneering departments of the Institute. Over the years, the department has progressed at a rapid pace with development in both the spheres of infrastructure facilities and academic programmes. The department has highly qualified faculty members engaged in teaching and research with the aim of achieving excellence in the field of Electrical Engineering.

The department offers Under Graduate course in Electrical Engineering and Post Graduate programmes in **Power Electronics & Electrical Drives** and **Power System**. The department offers Ph.D. programme to promote basic research activities in the various areas of Electrical Engineering. The consultancy and testing services are also rendered by the department.

**Sardar Vallabhbhai**

**National Institute of Technology, Surat,**

**Gujarat - 395007**

**TEQIP (II) sponsored**

**ONE WEEK SHORT TERM COURSE ON**

## **Analytics of Power Systems**

**27<sup>th</sup> Feb -3<sup>rd</sup> March, 2017**

**Coordinators**

***Dr. Pranav Darji***

***Dr. Hitesh R Jariwala***



**Organized by**

**Department of Electrical Engineering.**

**S. V. National Institute of Technology,**

**Surat-395007, Gujarat, India.**

### Registration and General Information.

Applications for the participation in the 'course' should reach in the attached format at the following address:

**Dr. Pranav Darji / Dr. Hitesh R Jariwala**

Coordinators,

Analytics of Power Systems

Electrical Engineering Department,

S. V. National Institute of Technology, Surat,

Gujarat, India, 395007.

**The last date of reaching applications is 15<sup>th</sup> Feb., 2017.** The candidates would be informed of their selection through E-mail by **17<sup>th</sup> Feb., 2017.**

**The breakfast, working lunch** will be provided to the participants. Limited seats are available in this course. **The participants would not be paid TA and DA.**

### Accommodation

Suitably furnished accommodation will be made available, if requested in advance, in the hostels/guest houses of the SVNIT on payment basis for out stationed candidates on twin sharing basis.

### Who can apply:

Faculty members and industrial person, Research Scholars and Engineering students.

**Speakers:** Most sessions will be conducted by coordinators, few speakers will be invited from IIT Bombay and industries

### Course fee

Students/ Research scholars

Rs. 1000/-

Institute/ College Teachers

Rs. 2000/-

Delegates from industries

Rs. 3000/-

The D.D. drawn in favor of “**Director, SVNIT Surat**” payable at ‘**Surat**’ should be sent along with the completely filled application forms.

### Course Content

- Detailed discussion about power flow problem and generalized programming of various power flow solution methods such as GS, NR, FDLF
- DC power flow and OPF and their programming
- Power system state estimation and its generalized programming
- Short circuit analysis and its programming
- Modelling and simulation of FACTS device based system such as STATCOM, VSC based HVDC
- Detailed modelling of Synchronous machine and simulation studies of multi-machine systems
- Wide area measurement systems and their applications to power systems

### Application Form ONE WEEK SHORT TERM COURSE ON **Analytics of Power Systems**

27<sup>th</sup> Feb- 3<sup>rd</sup> March., 2017

Name and Address of the applicant:

Gender: M/F \_\_\_\_\_ DOB: \_\_\_\_\_ Age: \_\_\_\_\_

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

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

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

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

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

Accommodation required? Yes/No: \_\_\_\_\_

Address of Sponsoring Authority:

### PAYMENT DETAIL:

DD No. \_\_\_\_\_ Date \_\_\_\_\_

Rs. \_\_\_\_\_ Bank Name: \_\_\_\_\_

Signature of the Applicant

The applicant will be permitted to participate in the above program if selected. Further, I have personally talked with the applicant and the applicant seemed to be sure to attend the course, if selected.

Signature of Head of the Institution with Seal