

About the Course

The course is primarily intended for faculty teaching power electronics, students pursuing their research in power electronics, and practicing engineers in the industry. As power electronic converters are inevitably required to process renewable/stored energy into useful electric form, many advanced converter control techniques are developed during recent years. These are in practice today but are missing in the graduate curriculums of power electronics. Even books explaining these details are not available. The objective of this course is to fill this gap with theoretical sessions explaining the operation and control of all the popular power converters (DC-DC, DC-AC, and AC-DC) used for harnessing renewable energy. Along with a few simulation sessions will also be conducted to validate the performance benefits of converter control algorithms learned during the theoretical sessions.

Course Objective

After completion of this course, a participant will learn the working principles of recent power electronic interfaced power supply systems, their control design, and simulation validations. The gained knowledge will be beneficial to research new control techniques for further performance enhancement of the power electronic 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, Power System, and Instrumentation & Control**. 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 (III) Sponsored

**ONE WEEK ONLINE SHORT TERM
COURSE ON**

**Applications of Power Electronic
Converters for Sustainable Living**

During 18-22 September, 2020

Organizing Committee

Dr. Sanjay Tolani, Dr. Rajasekharareddy Chillipi,

Dr. Sabha Raj Arya, and Dr. Rakesh Maurya



Organized by

Department of Electrical Engineering.

S. V. National Institute of Technology,

Surat-395007, Gujarat, India.

Registration and General Information

Prospective applicants for the participation in the 'course' should register either through the following link

<https://forms.gle/PLs96GMDeUWAdj38A>

or send the duly filled scanned copy of the application form to the following email id

APECS2020@gmail.com

The last date of registration is 8th Sept, 2020.
The candidates would be informed of their selection through E-mail by **11th Sept, 2020.**

E-certificates will be sent to the participants by email.

Address for any Communications

**Dr. Sanjay Tolani /Dr. Rajasekharareddy Chilipi
Organizing Committee, APECS-2020**

Department of Electrical Engineering
S. V. National Institute of Technology,
Ichchhanath, SURAT, Gujarat - 395 007.

Tel : 0261- 2201562 (office, EED)

E-mail: sanjay.tolani74@gmail.com and
rajasekhar55ch@gmail.com

Mo: 9005510586, 8247208518

Course Content

- Derivation, Design, and Simulation of Single-Stage Micro-Inverter Topologies.
- Power Converters for Fast Battery Charging.
- Application of Power Filters in Renewable Energy Systems.
- Role of Custom Power Devices in Electric Vehicles and Drives System.
- Continuous-Time Feedback Controller Design and its Discrete-Time Realization.
- Application of Conventional Control and Soft Computing in Power Converter Switching.
- Advance Control System and its Application.
- Optimization Techniques for Power Electronic Systems.

Who can apply

**Mostly Faculty members and industrial persons.
Research Scholars and Engineering students.**

Speakers

Faculty members from IITs/NITs/Others.

Course fee

Students/ Research scholars	Rs. 300/-
Institute/ College Teachers	Rs. 600/-
Delegates from industries	Rs. 1000/-

The registration fee should be paid online through net banking to “**Director SVNIT TEQIP IRG**” A/C No: **0277101028663**, Canara Bank, Nanpura Branch Surat, IFSC: CNRB0000277. The payment receipt will be required to upload during the online registration.

Application Form

**TEQIP (III) SPONSORED ONE WEEK SHORT TERM
COURSE (Online Mode) ON**

**Applications of Power Electronic Converters
for Sustainable Living**

During 18-22 September, 2020

Name and Address of the applicant:

Gender: M/F____ DOB:_____ Age:_____

Qualification:_____

Experience:_____

Designation:_____

Mobile:_____

Email:_(1)_____

: (2)_____

Address of Sponsoring Authority:

PAYMENT DETAIL:

Transaction details (NEFT/IMPS/RTGS receipt number)

Date_____

Rs. _____ Bank Name:_____

Signature of the Applicant

The applicant will be permitted to participate in the above program if selected.

Kindly attach institute ID card copy along with.