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An Online Faculty Development Course (e-FDP) on Power Quality Analysis and Improvement in Deregulated Power System 18th May 2024 to 22nd May 2024



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About the institute

National Institute of Technology Hamirpur is one of the thirty-one NITs of the country, which came into existence on 7th August 1986 as Regional Engineering College, a joint and cooperative enterprise of the Govt. of India and Govt. of Himachal Pradesh. On 26th June 2002, REC Hamirpur was awarded the status of Deemed University and upgraded to National Institute of Technology. The Institute offers Bachelor, Master and Doctoral programmes in Engineering, Sciences, Architecture, Management and Humanities. Various programmes serve the purpose of building a comprehensive foundation of knowledge and of enhancing confidence, creativity and innovation in its students.

About the department

Electrical Engineering Department, established in the year 1986, is one of the oldest departments of National Institute of Technology Hamirpur. The Department has been imparting quality education at undergraduate and post-graduate level. The faculty members have been active in teaching and research activities. The course curriculum is being revised from time to time so as to keep students abreast with latest emerging technologies. Various departmental laboratories have been strengthened and modernized by procuring state of art equipment's. Department is also equipped with latest experimental and computational facilities for taking up R&D and consultancy activities in different areas of Electrical Engineering.

About the e-FDP

In many states the shape and operation of the many electricity boards is turning towards the deregulation. In spite of the fact that there are some pitfalls here and there in implementing the restructuring regime, but it is also true that the end users enjoy the fruits of the deregulated electricity industry tree. The Deregulated environment has become more meaningful with the wider application of power electronic devices. However, the widespread use of these power electronics controlled devices and gadgets has resulted in non-sinusoidal current and voltage waveforms & similar non linearity. Such distorted waveforms are not desirable in some of the sensitive loads such as computers and illumination. A power electronic controlled device though works in perfection but in return deteriorates the power quality. Power quality issues are mainly related system voltage, current and power. Frequency variations and harmonics are of grave concern to the modern power utilities and consumers. The major problem being faced by the consumers is related with the deterioration of Power Quality even in the deregulated environment and thus requires the attention of the academicians, power system planners and utilities engineers. The main objective of this program is to create an awareness of the PQ issues amongst various stakeholders in the Deregulations power system. Problems and their solution in the MATLAB environment shall be given special attention in the e-FDP.

Last Date and Registration Fee

Last date to register: 10th May 2024
Student participants: Rs. 250
Academia/R&D Labs participants: Rs. 500
Industry participants: Rs. 1000

Organized by

Electrical Engineering Department, National Institute of Technology Hamirpur, 177005

Contact Details: Dr. Jiwanjot Singh and Dr. Chandrasekaran S

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Committee

Patron

Prof. Hiralal Murlidhar Suryawanshi,
Director, NIT Hamirpur (H.P.)

Chairman

Dr. B. B. Sharma
HOD, DoEE, NIT Hamirpur (H.P.)

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Prof. Ashwani Kumar Chandel
DoEE, NIT Hamirpur

Coordinators

Dr. Jiwanjot Singh and Dr. Chandrasekaran S
Assistant Professors, DoEE, NIT Hamirpur

Treasurer

Dr. R.K. Jarial
Associate Professor, DoEE, NIT Hamirpur

Organizing Committee(s)

All Faculty Members of Electrical Engineering
Department, NIT Hamirpur

Topics to be covered

- ❖ Power Quality problems during Grid Integration
- ❖ Compensation techniques used for reactive power compensation, load balancing, power factor correction and load voltage regulation etc.
- ❖ Power quality improvement in SMPS, drive systems, and renewable energy systems
- ❖ Active filter techniques used for harmonics elimination
- ❖ Power Converters with Improved Power quality Indices
- ❖ Low voltage ride through capability techniques
- ❖ Power quality Issues of Smart Grid
- ❖ Simulation of power converters, shunt and series active power filters
- ❖ Power quality problems in transmission and distribution system

Eminent Speakers

Prof. Sukumar Mishra, IIT Delhi
Prof. R.K. Pandey, IIT BHU
Prof. Ranjan Kumar Behera, IIT Patna
Prof. Biswarup Das, IIT Roorkee
Prof. Bharat Singh Rajpurohit, IIT Jodhpur
Prof. G. Saravana Ilango, NIT Trichirapalli
Prof. Ashwani Kumar Chandel, NIT Hamirpur
Dr. AK Verma, IIT Jammu
Dr. BB Sharma, NIT Hamirpur
Dr. Jiwanjot Singh, NIT Hamirpur

Eligibility

This program is open to faculty members, research scholars, PG & UG Students, and industrial personnel.

Total number of Participants

40 approximately

Guidelines for payment

1. Go to [State Bank Collect \(onlinesbi.sbi\)](https://onlinesbi.sbi)
2. Select 'Educational Institutions'
3. Select 'Filter by State': Himachal Pradesh
4. Select 'Educational Institution': NIT Hamirpur
5. Select 'Payment category': "Workshop STC FDP Conference" and fill the details to proceed further Link for payment

E-registration

After the payment fill the form for e-registration through google form:
<https://forms.gle/eTxEjNRGPfVdUg2ZA>

E-certificates

E-certificates will be provided to the participants, with at least 75% attendance

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