



POORNIMA


COLLEGE OF ENGINEERING

Promoted by Shanti Education Society, Affiliated to Rajasthan Technical University & Approved by AICTE

A Report on two week Short Term Training Program

- ♦ **TITLE AND DURATION:** “Advancement in Power system & Power Electronics” from 30 April to 04 May 2018.
- ♦ **SUPPORTERS:** TEQIP III
- ♦ **ORGANIZERS:** Electrical Engineering Department, Poornima College of Engineering, Jaipur.
- ♦ **BROCHURE / POSTER / LEAFLET / FLYER:**


**TEQIP III RTU (ATU) SPONSORED
ONE WEEK FACULTY DEVELOPMENT PROGRAMME
ON
“ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS”
(AIPSPE-2018)**



SANTOSH SHARMA
(EVENT COORDINATOR)
RAJASTHAN TECHNICAL UNIVERSITY, KOTA

APRIL 30 - MAY 04, 2018

ORGANIZED BY



PATRON
PROF. (DR.) OM PRAKASH SHARMA
DIRECTOR
POORNIMA COLLEGE OF ENGINEERING, JAIPUR

Prof.(Dr.) Virendra Sangtani
Coordinator

Prof.(Dr.) Sunil Kumar Gupta
Coordinator

Mr. Brijraj Singh Solanki
Coordinator

DEPARTMENT OF ELECTRICAL ENGINEERING

Poornima College of Engineering - Activity Report - 2017-18

DECLARATION I hereby declare that all the information mentioned above is true to the best of my knowledge and belief. I agree to abide by the rules and regulation of governing this FDP program. I shall attend the program for the entire duration.	ABOUT JAIPUR Jaipur, the Pink City of India, is enormously admired tourist destination in Rajasthan and India. As per the census of 2011 & 2008, it is the 10th largest city of India ranking among the fifty engineering global outsourcing cities. It was founded on 18th November, 1727 by Maharaja Sawai Jai Singh II, the ruler of Amber. It is an enthralling historical city and gateway to India's most flamboyant state. The city is colorful with oscillation of organized architecture unveiling the royal culture, arts and traditions as the heritage of Rajasthan.	IMPORTANT DATES Last date of receipt of duly filled registration form: April 24, 2018 Intimation of selection to the participants: April 25, 2018 Starting of the program: April 30, 2018	TEQIP-III Sponsored One week Faculty Development Programme on "ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS" AIPSPE April 30 to 04 May 2018
Place: _____ Date: _____ Signature of applicant	ABOUT RAJASTHAN Rajasthan is the largest state of the Republic of India by Area. It encompasses most of the area of the large, inhospitable Great Indian desert (Thar Desert), which has an edge paralleling the Sulley-Indus river valley along its border with Pakistan. The state borders Pakistan to the west, Gujarat to the southwest, Madhya Pradesh to the southeast, Uttar Pradesh & Haryana to the northeast & Punjab to the north. Rajasthan covers an area of 3,42,239 sq km. The Proportion of the state's total area to the total area of the country is 10.41%.	REGISTRATION The registration is free for faculty members from Non-TEQIP funded RTU affiliated Engineering Colleges. Participants are required to fill the registration form and Scanned copy of duly filled registration forms can be sent to ftp.pceee@poornima.org . The maximum number of participants will be 50 and will be selected on a first-come-first-served basis. The selected candidates will be intimated through E-mail: ftp.pceee@poornima.org	AIPSPE-2018 Jointly Organized by RAJASTHAN TECHNICAL UNIVERSITY, KOTA and Department of Electrical Engineering POORNIMA COLLEGE OF ENGINEERING Affiliated to Rajasthan Technical University, Kota & Approved by AICTE, New Delhi A Member of POORNIMA FOUNDATION
RECOMMENDATION This is to certify that Dr./Mr./Mrs./Ms. _____ an employee of our Organization is hereby permitted to attend the FDP on "ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS" at Department of Electrical Engineering (PCE, Jaipur) during April 30 to May 04, 2018, if selected. Date: _____ Signature of the Recommending Authority _____ Name: _____ Designation: _____ Office Seal: _____	HOW TO REACH FDP VENUE Jaipur is one zenith of the popular tourism Golden Triangle circuit-Agra-Delhi-Jaipur and is well connected to most parts of India by air, train and road. Poornima College of Engineering is located about 268 km by road & 308 km by train from Delhi. It is situated at the Jaipur, capital of Rajasthan and is encircled by several industries. Jaipur Railway Station and Jaipur Bus Stand are close by and are about 25 km away from the venue of the FDP.	CONTACT PERSONS Dr. Om Prakash Sharma Director, PCE Mobile: +91-9628015792 E-mail: opsharma@poornima.org Dr. Virendra Sangtani Prof. and HOD, Electrical Engineering Mobile: 9799884938 E-mail: virendra.sangtani@poornima.org Dr. Sunil Kumar Gupta Prof. Electrical Engineering Mobile: 9460595513 Email: sunil.gupta@poornima.org Brijraj Singh Solanki Asst. Professor EE Mob: 9829533943 Email: brijraj@poornima.org	SAVE WATER SAVE ENERGY SAVE ENVIRONMENT SAVE LIFE SAVE EARTH SAVE TREES SAVE FUEL BE PRODUCTIVE
ACCOMMODATION Accommodation and meal will be provided to the participants. All participant are requested to get the accommodation facility on first-come-first served basis in the Poornima Guest House/ Hostels (free of charges). If any assistance is required, please contact: Mr. Md. Asif Iqbal (9960222384)	Road Map to Poornima Foundation 	Venue Department of Electrical Engineering POORNIMA COLLEGE OF ENGINEERING (SI-4 RICO Institutional Area, Sitapura, JAIPUR-302022 (Raj.), INDIA Phone/Fax: 0141-2770790-92 • Website: www.pce.poornima.org	SAVE WATER SAVE ENERGY SAVE ENVIRONMENT SAVE LIFE SAVE EARTH SAVE TREES SAVE FUEL BE PRODUCTIVE

POORNIMA COLLEGE OF ENGINEERING 	DEPARTMENT OF ELECTRICAL ENGINEERING The Department of Electrical Engineering (EE) was established in 2000. National Board of Accreditation (NBA) accredited the EE department in 2009. It has an intake capacity of 180 students. The department has highly qualified, committed and research oriented faculty members. The department has laboratories as per Rajasthan Technical University syllabus with State-of-The-Arts facilities in diversified fields. It has a departmental library, which contains more than 250 titles. The department engaged in research in various areas of Electrical Engineering including Power Systems, Energy Studies, Power Electronics, Electrical Drives, High Voltage engineering, Image Processing and Multimedia etc. The vision of the department is to be a model of excellence in Professional Education and Research by creating stimulating academic environment among electrical engineers.	CHIEF PATRON Prof. N.P. Kaushik Vice Chancellor, RTU Kota	REGISTRATION FORM TEQIP-III Sponsored One week Faculty Development Programme on "ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS" AIPSPE-18 April 30 to 04 May 2018
Poornima College of Engineering (PCE), the pioneer institute of PGC was established in the year 2000 with aim of imparting pragmatic technical education. In its magnificent journey of 17 years, PCE has set benchmark and reached at new pinnacles in engineering education with dedication, perseverance and devotion. With student strength of approx. 3500 studying six specialization of engineering (CSE, ECE, EE, IT, ME & CIVIL), more than 3.5 lacks square feet of built up area, highly qualified faculties, state of the art infrastructure, good placements and industry-led curriculum, PCE is marching ahead of others with tremendous growth since its inception.	OBJECTIVE To enrich the Knowledge of faculties through interaction with eminent personalities from industries and academics. The knowledge sharing will improve the teaching learning process to the students and benefit the society.	PATRONS Dr. Om Prakash Sharma Director, Poornima College of Engineering	Name: _____ (In block letters) Qualification: _____ Designation: _____ Department: _____ Organization: _____ Teaching Experience: _____ Address: _____
Some key salient features are: <ul style="list-style-type: none"> Department of CSE & ECE are accredited by NBA. Successfully running three MHRD Missions: (i) Quality Enhancement in Engineering Education (QEEE) (ii) National Mission in Education through ICT & (iii) Indian Institute of Remote Sensing (IIRS) outreach Programs. Awarded by Infosys as an advanced partner institute for successfully running 'Campus-Connect Program'. An institute designated as Centre of Excellence by IBM. Successfully running student chapters and forums of various Professional Societies such as IETE, IEEE, ISTE, IE, ISLE, ASHRAE, ISRAE, ISRC & CSI. Online subscription & membership of IEEE, DELNET, MOODS & National Digital Library. The only institution permitted by RTU to admit FN-PO/GULF students. Cross Culture global institution and volunteer exchange experiences across the global through collaboration with AIESEC. 	COURSE CONTENT <ul style="list-style-type: none"> Electrical Machines for Automotive Applications Soft-switching Techniques for High-Frequency Power Conversion Automotive Power Electronics for ground vehicles and marine applications Innovative Power Electronics Topologies Resonant and PWM converters, Bidirectional converters Multilevel Inverters Optimal control of electrical drives including medium voltage industrial drives Distributed Generation: Renewable Integration; Rural Electrification, Micro-grid Energy System Control and Automation Power, Energy, Design, Control and Processing Advances Trends in Power Generation from Renewable Energy Sources 	RTU (ATU) TEQIP-III COORDINATOR Prof. Dharendra Mathur	Pin Code: _____ Mobile Number: _____ E-Mail: _____ Is the institute Non-TEQIP funded RTU affiliated Engineering Colleges or not? (Yes/No) _____ Accommodation required (YES/NO) _____
ELIGIBILITY The course is open to Engineering faculties belonging to only from the Non-TEQIP funded RTU affiliated Engineering Colleges	RTU (ATU) TEQIP-III COMMITTEE Prof. D. K. Samariya Notal Officer Procurement Dr. Harish Sharma Notal Officer Academic Dr. S. D. Purohit Notal Officer Finance	RTU (ATU) TEQIP-III EVENT COORDINATOR Mr. Santosh Sharma	Signature of applicant _____
SAVE WATER SAVE ENERGY SAVE ENVIRONMENT SAVE LIFE SAVE EARTH SAVE TREES SAVE FUEL SAVE ELECTRICITY	CAMPUS EVENT COORDINATORS Dr. Sunil Kumar Gupta Dr. Virendra Sangtani Brijraj Singh Solanki Professor EE Professor & HOD EE Asst. Professor EE	RTU (ATU) Academic Committee Dr. Irum Alvi Conference Mr. Santosh Sharma Expert Lecture Mr. Anshul Bansal GATE & Induction Mr. Dinesh Kumar Workshop	ORGANIZING COMMITTEE Dr. Chetan Khemraj Professor, EE, PCE Dr. Neeraj Tiwari Professor, EE, PCE Dr. Deepika Chouhan Professor, EE, PCE Mr. Amba Lal Mathur Associate Professor, EE, PCE Mr. Mahesh Meena Associate Professor, EE, PCE

ABOUT THE STTP:

Department of Electrical Engineering, Poornima College of Engineering, Jaipur is organizing a TEQIP-III Sponsored One week Faculty Development Programme On "ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS" in association with Rajasthan Technical University, Kota from 30 April to 04 May 2018.

In this connection, we take this opportunity to invite your good-self and faculties to participate and make the RTU (ATU) TEQIP-III FDP on ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS Successful.

The global energy crisis occasioned by the gradual increase in the world population, climate change, and the need for cleaner productions has generated much interest on renewable energy sources, including solar power (photovoltaic, thermal, and concentrated), wind

power, hydropower, tidal power, wave power, geothermal, biofuels, biomass, and the renewable part of waste. The use of renewable energy sources helps to reduce air pollution and climate change, thanks to the production of fewer greenhouse gas emissions. Other benefits of renewable energy include a higher energy security, economic growth, and a movement away from the reliance on fossil fuels (oil and gas).

Renewable energy can be converted to electricity, which is transported to residential, commercial, industrial, and administrative buildings for use. Nowadays, approximately 20% of the globally produced electricity comes from renewable sources. This is the reason the renewable energy-based generation of electricity is currently experiencing rapid growth in power grids. Moreover, the increasing use of renewable sources has promoted the development of microgrids, smart grids, and distributed generation systems. For example, distributed generation, that is, small power generating units near end-users, allows for reducing the amount of electricity that must be generated at centralized power plants and transported using the power grid.

In parallel to the development of modern microprocessors and advanced control strategies, power electronic devices are essential for renewable energy systems. In particular, power electronics and controllers play an important role in renewable energy conversion, as it requires the use of power electronic converters to convert the electrical waveform generated by wind turbine generators, PV cells, and so on (direct current—DC), to that required by electric grids and loads (usually alternate current—AC), while ensuring the stability and power quality of the grid (frequency, voltage, power factor, harmonics, etc.). Furthermore, as renewable energy systems provide intermittent electricity, power electronic devices are also used to store the energy in batteries.

This Special Issue aims to receive high-quality submissions with significant technical contributions related to the emerging technologies, techniques, and applications of power electronics in renewable energy systems (RES). Topics of interest include, but are not limited to, the following:

- Advances in power electronic technologies and techniques for RES
- Advances in power electronic interfaces for RES
- Power electronic converters (including inverters, rectifiers, cyclo-converters, etc.) in RES
- Power electronics and energy storage systems in RES
- Power electronics and power quality in RES
- Power electronics and distributed generation
- Power electronics in microgrids and smart grids
- Power electronics control (generator level, plant level, and transmission level)
- Optimization in power electronics with applications to RES
- Intelligent power electronics in RES



POORNIMA

COLLEGE OF ENGINEERING

TEQIP-III sponsored
One Week Faculty Development Program
On
Advancement in Power Systems & Power Electronics (AIPSPE)
30April to 4 May 2018
Q-Sheet
Date & Day: 30th April, 2018 (Monday)
Time: 08:30am -3:30pm
Venue: Seminar Hall, CG-05, PCE

Time	Schedule
08:30 AM-10:30 AM	Registration of Participants
10:30AM-11:00 AM	Breakfast
11:00AM-11:05 AM	Welcome of Dignitaries by the Anchors
11:05AM-11:07 AM	Ganesh Stuti by Himanshu Sharma & Group
11:07AM-11:12 AM	Request the dignitaries from RTU Kota & PF, Director (PCE), HOD (EE,PCE) and Coordinators for lighting of lamp
11:12AM-11:17 AM	Felicitation of Dignitaries
11:17AM-11:25 AM	Welcome Address by Dr. Om Prakash Sharma, Director, PCE
11:25AM-11:30 AM	Introduction about the FDP by Coordinator (FDP) Dr. Sunil Kumar Gupta Prof., Dept. of Electrical Engineering
11:30AM-01:00 PM	Session I (Expert Lecture by Dr. Rajesh Kumar, Associate Professor, MNIT, Jaipur)
01:00 PM-1:30 PM	LUNCH
01:30PM-3:30 PM	Session 2 (Expert Lecture by Dr. Akshay Kumar Rathore Associate Professor, Concordia University, Canada)

**TEQIP-III Sponsored One week Faculty Development Programme on
“ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS” (AIPSPE-2018)**

Date: 30April to 04 May 2018

Venue: Poornima College of Engineering, Jaipur

Tentative List for Expert Lecture

Time Day & Date	8.30-10.30am Session	10.30- 11.00am	11.00-1pm (Inaugural + Session)	1- 1.30p m	1.30-3.30pm Session
Monday (30 April,20 18)	Registration	Breakfast	Dr. Rajesh Kumar Associate Professor MNIT Jaipur	Lunch	<i>Dr. Akshay K. Rathore Associate Prof. Concordia Univers ity, Montreal, Canada</i>
Tuesday (01 May, 2018)	Dr. Akshay K. Rath ore Associate Prof. Concordia Universit y, Montreal, Canada		Dr. M.P.Sharma JVVNL, Jaipur		Dr. Rajesh Kumar Associate Professor MNIT Jaipur
Wednesd ay (02May, 2018)	Sh. Santosh Sharma Assistant Professor RTU, Kota		M. L. Gupta AEN,RRVNL		Dr. Dheerendra Singh Associate Professor BITS Pilani
Thursda y (03 May, 2018)	Dr. Dheerendra Singh Associate Professor BITS Pilani		Dr. Naveen Jain Assistant Professor CTAE, Udaipur		Dr. Anoop Arya Assistant Professor NIT, Bhopal
Friday (04 May, 2018)	Dr. Naveen Jain Assistant Professor CTAE, Udaipur		Dr. Anoop Arya Assistant Professor NIT, Bhopal		Valedictory

**A Brief Report of Inaugural Session held on 30th April, 2018 of TEQIP-III Sponsored
One week Faculty Development Programme on “ADVANCEMENT IN POWER
SYSTEM & POWER ELECTRONICS” (AIPSPE-2018)**

The Departments of Electrical Engineering of Poornima College of Engineering organized a TEQIP-III Sponsored One week Faculty Development Programme on “ADVANCEMENT IN POWER SYSTEM & POWER ELECTRONICS” (AIPSPE-2018).

The Faculty development program started with the stuti of lord ganesh and lighting of lamp. The occasion AIPSPE-2018 witnessed the presence of Dr. Rajesh Kumar sir, Associate prof. MNIT Jaipur Chief Guest Of this inaugural function, Shri Santosh Kumar, Asst. Prof., UCE Kota (Guest of honor), Dr. Om Prakash Sharma, Director, Poornima College of Engineering, Dr. Virendra Sangtani HOD (Electrical Engineering), Dr. Sunil Kumar Gupta (Event Coordinator), Mr. Brijraj Singh Solanki (Event Coordinator), Md. Asif Iqbal (Event Coordinator) and Dr. Garima Mathur HOD ECE, professors and faculty members and Participants.

Dr. Om Prakash Sharma, Director PCE in his opening remarks introduce about Poornima Foundation and Shanti Education Society. He also motivated the participants and student to adopt and work on new techniques related to Faculty Development Programme. He further emphasized that this type of faculty development program must be organized on regular basis to improve the quality of research among faculty members.

Dr. Sunil Kumar Gupta, Faculty development coordinator (AIPSPE-2018) gave the introduction about the “One week Faculty Development Programme”. In his address he highlighted that 80+ registration forms are submitted from various organizations and we have selected around 50 participants. We have invited talk by 10 Keynote speakers who are distinguished researchers & academician from BITS Pilani, NITs and abroad on themes of FDP.

Dr. Rajesh Kumar sir, Associate prof. MNIT Jaipur is delivered keynote on Design and development of Intelligent Grid connected Inverters. He highlighted about the dynamic interaction of static inverter and talked about high localized PV penetration on distributed feeders.

Dr. Akshay Kumar Rathore, Associate Professor at Electrical and Computer Engineering, Concordia University, Montreal, Canada delivered keynote on Power Electronics in Modern Applications. He also highlighted the key challenges on the capacity sizing of the distributed energy resources and energy storage. He also talked about maintaining the voltage frequency and power quality in present power system and recent advancement of power electronics involvement to resolve power quality issues.



