# **A Report**

## On

# TEQIP III Sponsored One Week STTP on "RECENT ADVANCES AND PRACTICES IN POWER & ENERGY SECTORS" (9<sup>th</sup> December - 14<sup>th</sup> December 2019)

# **Jointly Organized**

by

Department of Electrical Engineering **B V M Engineering College** (An Autonomous Institution) Vallabh Vidyanagar – 388120, Gujarat www.bvmengineering.ac.in Department of Electrical Engineering Govt. Engineering College (An Autonomous Institution) Banswara – 327001 Rajasthan www.gecbanswara.ac.in



TEQIP-III Sponsored One Week Short Term Training Program On "RECENT ADVANCES AND PRACTICES IN POWER & ENERGY SECTORS" 09 <sup>th</sup> – 14 <sup>th</sup> December 2019	Chief Patron Er: Bhikhubha:B.Patel (Hon: Chairman, CVM & BoG BVM) Patrons	Program Conveners Dr. N. G. Mishra Professor (BVM) Asso. Prof. (BVM) Advisors	
NPIU Contraction of System of Excellence	Dr. P. M Khodke Shri Manishkhai Patel (CPA, NPIL) (Hor. Vice President, CVM) Dr. Bhavesh Patel Dr. S. G. Patel (VC, CVM) (Hor. Secretory) Shri R. C. Talati Shri. Mehul Patel (Hon. Jt. Secretary) Shri Vishal Patel (Hon. Jt. Secretary)	Dr. B. G. Desai Energy Audit Consultant, Baroda Dr. V N Kamat Director, Baroda Meters Ltd, V.U.N. Dr. Satish Chetwari Asst. Director & Head (R&D), ERDA, Baroda Dr. Chirag Parekh Manager, Atlanta Electricals Pvt. Ltd., GIDC, V.U.N	
Jointly Organized by Department of Electrical Engineering B V M Engineering College (An Autonomous Institution) Vallabik Vidyanagar – 388120, Gujarat Website.www.bumengineering.ac.in	President Dr. Indrajit Patel Principal, BVM Principal, GECB TEQIP III Core Committee	Registration Details           Fees:         PG Students         : Rs. 500/-           Research Scholars/Academicians         : Rs. 1000/-         Delegates from industries           Delegates from industries         : Rs. 2500/-         The registration fees should be paid in from of Cheque or Bank	
Department of Electrical Engineering Govt. Engineering College (An Autonomous Institution) Banswara – 327001, Rajasthan Website: www.geobanswara.ac.in	Dr. S. D. Dhiman TEQIP III Coordinator Dr. P. M George Nodal Officer, Academics Dr. T. D. Pawar Nodal Officer, Procurement Dr. S. B. Patel Nodal Officer, France Dr. D. M. Patel FSD Co-coordinator Dr. J. M. Rathod Dr. D. G. Thakore Advisor	Demand Draft drawn in favor of Principal, BVM Engineering College, sysable at Vallah Valyanagar. It is computiony for all applicants to send hardsopy with Demand Draft / Cheque on or before 04 <sup>th</sup> December 2019 to the following address. <b>Programme Coordinator</b> Electrical Engineering Department, BVM Engineering College, Vallah Vidyanagar - 38120, Ta. & Dist. Anand (Gigrard)	
Coordinators         Co coordinators           Prof. Y. R. Prajapati (BVM)         Prof. A. R. Patel (BVM)           Dr. Akshay A. Pandya (BVM)         Prof. G. K. Sharma (BVM)           Prof. Nitesh Kataria (GECB)         Prof. G. K. Sharma (BVM)	Department of Electrical Engineering Dr. N. G. Mishra Head(BVM) Prof. Abhishek Singh Head (GECB)	Website: www.bwmengineering.ac.in Email: stip_ee@bwmengineering.ac.in Mobile No: 7455908815 / 9879296030 Last date of Registration: 25 <sup>th</sup> November 2019. Confirmation of Participation: on or before 30 <sup>th</sup> November 2019.	

#### ✤ About CVM

One of the greatest son of India Late Sardar Vallabhbhai Patel inspired Shri Bhaikaka and Shri BhikhabhaiSaheb for rural resurgence of post-independent India through education and thus Charutal Vidya Mandal was established in the year 1945 as a charitable trust with a prime objective of rural development through education to bring about the social awakening, social upliftment and enrichment. Over subsequent years, Dr H. M. Patel consolidated the efforts in by the founder. In 1994 Dr C. L. Patel took over the reigns of CVM as the chairman, and through his dynamic leadership. He added a modern education campus at New Vallabh Vidyanagar. At present, CVM operates 48 educational institutions with 45000 students from 18 states of India and 12 countries across the world under the dynamic chairman Shri Bhikhubhai Patel. CVM is one of the major education trusts of our country catering quality education to all sections of society. CVM is celebrating 75 year of success and excellence this year.

#### ✤ About BVM

BVM is a Premier Autonomous Institution of Charutar Vidya Mandal (CVM) founded in 1948. The motto of BVM: Work is worship. BVM is the first-degree engineering college of the Gujarat state. More than 21000 engineers have graduated from this college. BVM offers B. Tech, M. Tech and Ph. D degree Programme. The college is situated at Vallabh Vidyanagar, which is about 4 km from Anand Town. The most striking feature of BVM is the dedicated and experienced faculty base.

#### ✤ About Electrical Engineering Department

The Department of Electrical Engineering was established in 1948 with an intake of 25 seats which increased to 60 in 1954. The program is accredited by NBA. The program has been granted autonomy by the University Grant Commission from the academic year 2015-16.

### ✤ About TEQIP III

The Project, Third Phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for technical Education as a key component for improving the quality of Engineering Education in existing institutions with special consideration for low income states and special category states and support to strengthen few affiliated technical universities to improve their policy, academic and management practices. The project will be implemented in alignment with the 12th Five Year Plan (2012-17), based on faster sustainable, and inclusive growth. It emphasizes increasing the supply of highly skilled workers to drive the economy as well as helping low-income states catch up with their more advanced neighbours. BVM is one of 190 government and government-funded institutions nationwide selected for TEQIP-III and the only institute in Gujarat state to have this honour.

### ✤ About the program

The program is intended to impart participant training in the area of recent advances & practices in the power and energy sectors. Power generation, transmission & distribution industry and process industries need a large amount of motive power for different applications. These drives need to be rugged and energy efficient to provide the needed reliability of service. Power transformers and induction motors typically meet the heavy-duty needs of the industry in a very effective manner. To ensure that these machines operate effectively, the health of the machines needs to be verified through condition monitoring techniques to avoid interruptions. The need for energy use in an effective manner for industries by Energy Management, Automation and IoT applications will discuss.

### Course Content

- > Technological developments in industries.
- ➤ Fault detection techniques of machines.
- > Practices in energy management with industrial automation.
- > The current scenario in a renewable energy system.
- $\succ$  IoT for Industry.
- $\succ$  Industrial visit.

#### Program Outcomes

At the end of the course, the participants are able to understand fault diagnostic techniques in machines. Participants are explored in energy management with industrial automation in different utilities of industrial, commercial and residential sectors. Also, get experience in IoT applications for industry.

### Press Note in Sardar Gurjari Date: 15.12.2019



### Schedule

# TEQIP III Sponsored One Week STTP on "RECENT ADVANCES AND PRACTICES IN POWER & ENERGY SECTORS" (9<sup>th</sup> December - 14<sup>th</sup> December 2019) Electrical Engineering Department, BVM Engineering College

Day 1 : 09/12/2019 – Monday									
9.00 - 10.00	10.00 - 10:30	10:30 - 12:30	12:30 - 13:30	13.30 - 15.30	15.30 - 15:45	15:45 - 18:00			
Registration & High Tea	Inauguration	"Fault Detection methods of IM " Dr. Satish H. Chetwani Erda	Lunch Break	"Hands on practice on PLC/SCAD A" Hi-Mak Controls Vadodara,	Tea	"Hands on practice on PLC/SCADA" Hi-Mak Controls Vadodara			
Day 2 : 10/1	2/2019 – Tuesd	lay			1				
9.30 - 10.00	10.00 - 12.00	12.00 - 12:30	12:30 - 15:30		15:30 to 18:00				
High Tea	"IOT" Dr. V. N. Kamat BML V U Nagar	Lunch	Live demonstration on "Design, Assembly and Testing of Motors" at Rotomag Motors & Controls PVT Ltd., Napa (Industrial visit)		Live demonstration on "Design, Assembly and Testing of Transformers" at Atlanta Electricals Pvt. Ltd., V U NAGAR (Industrial visit)				
Day 3 : 11/1	2/2019 – Wedn	esday			•				
9.30 - 10.00	10.00 - 12.00	12.00 - 12:30	12:30 - 15:30		15:30 to 18:00				
High Tea	"Recent trends in communicatio n utility GETCO" Er. Janak Chandegara	Lunch	Live demonstration on "Solar-Biogas Refrigeration System for Transient Storage of Horticulture Produce" at Anand Agriculture University, Anand (Field Visit)		Live demonstration on "Solar Thermal Field, Solar PV Field & Low Cost Fixed Dome Biogas Plant" at Anand Agriculture University, Anand (Field Visit)				
Day 4 : 12/1	12/2019 - Thurs	dav							
9.30 - 10.00	10.00 - 12.00	12.00 - 13:00	13:00 -	- 15:00	15:00 -15:15	15.15 - 18:00			
High Tea	"Solar Energy Systems and Application" Radhika Savalia GERMI	Lunch	Recent Trends in Power System Protection Er. Kalpesh B. Tank GETCO, Karamsad		Tea	Live demonstration on "Power System Protection" at Laboratory of BVM Er. Kalpesh B. Tank GETCO, Karamsad			
Day 5 : 13/1	2/2019 – Friday	y			•				
8.00 - 9.00	10.00 - 12.00	12.00 - 13:00	13:00 -	- 15:00	15:00 -15:15	15.15 – 18:00			
High Tea	Live demonstration on "Applications of Renewable Energy" at SPRERI (Field Visit)	Lunch	Recent Trend Vehi Dr. Jignesh	cles	Tea	Recent Trends in Electrical Vehicles Dr. Jignesh Makwana			
Day 6 : 14/12/2019 – Saturday									
9.30 - 10.00	10.00 - 12.00	12.00 - 13:00	13:00 - 14:00						
High Tea	"Fault Detection of Transformer by SFRA" Dr. Akshay A. Pandya BVM	Lunch	Feedback & Valedictory Function						

## BVM Engineering College (An Autonomous Institute) Electrical Engineering Department RECENT ADVANCES AND PRACTICES IN POWER & ENERGY SECTORS 9<sup>th</sup> to 14<sup>th</sup> December 2019

INAUGURATION PROGRAM (10.30 am LRUC, BVM)

- 1. INVOCATION
- WELCOME AND About STTP Dr N. G. Mishra
   PRINCIPLE'S REMARKS Dr Indrajit Patel
   CHIEF GUEST'S REMARKS Dr. S. G. Patel
   VOTE OF THANKS Dr. A A Pandya

Program will be followed by keynote Address by Dr. Satish Chetwani, Head R&D Switchgear and Short circuit labs, ERDA, Vadodara

Photographs of the Short Term Training Program



# Inauguration





The session started from the Key Note Speech on "Fault Detection Methods of Induction Motors" by Dr. Satish H. Chetwani, Head R&D, Switchgear and Short, ERDA.



"Hands on practice on PLC/SCADA" has been conducted by Er. Kiran Badwaik, Hi-Mak Controls, Vadodara in the afternoon sessions.



Session on "IOT" by Dr. V. N. Kamat, Baroda Meters Ltd., V. U. Nagar has been conducted with practical demonstration.





Industrial Visit at Rotomag Motors & Controls Pvt. Ltd., Napa plant has been planned with Live demonstration on "Design, Assembly & Testing of Motors".



Industrial Visit at Atlanta Electricals Pvt. Ltd., V. U. Nagar plant has been completed with Live demonstration on "Design, Assembly & Testing of Transformer".



Industrial visit with practical demonstration for VAM system and biogas plant installed at food and processing unit has been planned to understand its application





Expert speak on Electrical Vehicle industries.



Glimpse of the Valedictory Session





