

विद्युत VISHWA



Vishwakarma Government Engineering College, Ahmedabad
NR. VISAT THREE ROADS, SABARMATI-KOBA HIGHWAY,
CHANDKHEDA, AHMEDABAD-382424

About Department

The Electrical Engineering Department started in 1994 and offers bachelor of engineering in electrical engineering. The program has intake of 150 students and is designed and updated keeping in view the constantly changing industrial needs, skills and challenges emerging out of new research. The department is very well equipped with laboratory facilities and constantly upgrading available hardware and software facilities to create research/testing environment leading to a great opportunity to learn and progress in different technical domains. The department has well qualified faculties playing major roles in creation of competent & disciplined engineers to serve the nation.

Vision

To produce comprehensively trained, socially responsible and innovative electrical graduates to contribute to the society

Mission

- To develop well equipped laboratories and infrastructure for conductive learning.
- To produce competent and disciplined electrical engineers to serve the nation.
- To help in building national capabilities for excellent energy management and to explore nonconventional energy sources.
- To produce electrical engineers with an attitude to adapt themselves to changing technological environment.
- To enhance entrepreneurship skills through start up.

Program Educational Objectives (PEO's)

- *Develop and conduct appropriate electrical experimentation, analyse and interpret data, and use engineering judgment to draw conclusions.*
- *Acquire and apply new knowledge as needed, using appropriate learning strategies through innovation.*
- *Work independently on a project or as a team leader.*
- *Get an employment in various government and private sector companies, pursue research and innovation.*

Program Specific Outcome (PSO's)

- *Apply electrical engineering knowledge to analyze, test, and develop innovative solutions for industries and entrepreneurship which aim to address the relevant societal and environmental issues.*
- *Utilize various modern electrical instruments and simulation tools to design, analyze, and optimize complex electrical circuits and networks, incorporating existing and emerging technologies.*
- *Exhibit technical expertise in evaluating and modifying electrical systems for energy efficiency, automation, interdisciplinary collaboration, and real-world problem-solving.*

Editorial Team

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Prof. Grishma P Pipaliya

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Department Events / Activities

Electrical Department in collaboration with VAA Organized an Expert Lecture on “Essential Industry Skills for Electrical Engineers: Bridging Theory and Practice” by Mr. Chirag B Chaudhary, Junior Engineer, Technical Advisor to MD GPRD Cell, GUVNL, Gandhinagar on 30th August, 2024. Prof. A T Mistry coordinated the event.



||Mr. Chirag Chaudhary, addressing Electrical students||

Expert Talks

Prof. S N Pandya (Electrical Engineering Department):
Delivered an Expert talk on “Power Quality issues in Power System” on 28th June 2024 at STTP on Power Quality issues in Power System organised by NITTTR at Gujarat Extension Centre NITTTR, Ahmedabad.

Prof. R R Kapadia (Electrical Engineering Department):
Delivered an Expert talk on "Harmonic Mitigation Techniques" on 26th June 2024 at STTP on Power Quality issues in Power System organised by NITTTR at Gujarat Extension Centre NITTTR, Ahmedabad.

Research & Innovation

- **Kaustubh A. Vyas, Minaxi L. Patel, Anita Y. Solanki, Jignasha A. Prajapati, Hemang S. Pandya (2024).** Using Cost Efficient Extra High Voltage Transmission Line Design Methodology for Reduction of Transmission Congestion in India. *J. Electrical Systems* 20-3 (2024):5259-5269.
- **Vaibhavi M. Parmar, Dharmishta V. Makwana, Nilam B. Panchal, Mehulsinh G. Jadeja, Rinal K. Ahir, Vaishali K. Patel.** TS-Fuzzy Controllers based Vector Control of Induction Motor for Water Pumping System fed by Hybrid Standalone PV-Wind-Battery. *International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING* 12 Issue: 03, 2147-6799.
- **Kaustubh A. Vyas, Hitendra B. Vaghela, Nitinkumar R. Prajapati, Roopal R. Kapadia, Nilesh J. Patel.** Selection of Best Conductor Configuration in Double Circuit Extra High Voltage Transmission Lines Considering Electromagnetic Field Effects. *INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING* in volume 12 issue 4.
- **Dharmistha V. Makwana, Nilam B. Panchal, Vaibhavi M. Parmar, Parul A. Upadhyay, Mehulsinh G. Jadeja.** ANN Intelligent Control Based on Space Vector Modulated DTC for Induction Motor Drive. *International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING* 2147-6799.
- **Nilam B. Panchal, Vaibhavi M. Parmar, Dharmistha V. Makwana, Mehulsinh G. Jadeja, Rinal K. Ahir.** Enhancing energy efficiency in smart grid through reinforcement learning based control strategy. *Journal of Electrical Systems* 1112-5209.
- **Hitendra B. Vaghela, Nitinkumar R. Prajapati, Gaurang Bipinchandra Buch, Tejaskumar Ramanbhai Patel, Roopal R. Kapadia.** Comprehensive Review on Solar Water Pumping System for Irrigation Application. *Journal of Electrical Systems.* 20-9s (2024): 2323-2331.

- Grishma P Pipaliya, Nisha B Lodha, Nilesh J Patel, Pulin J Purohit, Divyesh J Vaghela. Effectiveness of Travelling Wave Protection Scheme to Develop Fastest Protection Scheme for Transmission Line. J. Electrical Systems Vol. 20 No. 3 (2024).
- Pulinkumar J. Purohit, Mehulsinh G. Jadeja, Vishal G. Jotangiya, Parin H. Chauhan, Divyesh J. Vaghela. (2024). Improvement of Power Quality in Single Stage Grid Connected PV System with Novel Configuration of Multilevel Inverter. SSRG International Journal of Electrical and Electronics Engineering, 11(4), 234-239.
- Parin H. Chauhan, Vishal G. Jotangiya, Divyesh J. Vaghela, Mehulsinh G. Jadeja, Pulinkumar J. Purohit, Dilip Dobariya. (2024) Intelligent Control Techniques for AC-DC-AC Converter fed PMSM Drives. International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING. 12(3), 3995–4002.
- Vishal G. Jotangiya, Parin H. Chauhan, Pulinkumar J. Purohit, Mehulsinh G. Jadeja, Dilip Dobariya, Divyesh J. Vaghela. (2024). Evaluation and Operation of Various DC-DC Converter Topologies with Effective MPPT in a Photovoltaic System. J. Electrical Systems 20(3): 1540-1551
- Mehulsinh G. Jadeja, Pulinkumar J. Purohit, Parin H. Chauhan, Vishal G. Jotangiya, Divyesh J. Vaghela, Jayanti A. Jadav (2024). Effective Energy Management and Voltage Stabilization of Hybrid Standalone Microgrid System Under Transient Load Condition. International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING. 12(4), 2073–2080.
- Jadeja, M. G., Makwana, D. V., Parmar, V. M., Panchal, N. B., (2024). Novel PV Power Generation System with Whale Optimization Algorithm under Partial Shading. Journal of Electrical Systems, 20(3), 3662-3669.

Faculty News

Accomplishments

Prof. S N Pandya

- Appointed as Academic Council Member at Gujarat Technological University on 16th July, 2024.
- Prof. S N Pandya has become a member of the Education Committee of GCCI FOR THE YEAR 2024-25.

Sports Achievements

Prof. H. B. Vaghela was the winner in the GECTGOA badminton tournament (men's doubles category) organised on 19th October 2024. Faculty members from diploma degree and pharmacy institutes participated in the tournament.



Prof. H. B. Vaghela recieving trophy

Prof. Vaibhavi M Parmar was the in the runner-up GECTGOA badminton tournament (men's doubles category) organised on 19th October 2024. Faculty members from diploma degree and pharmacy institutes participated in the tournament.



**Prof. Vaibhavi M Parmar
recieving trophy**

Prof. H. B. Vaghela and Prof. Vaibhavi M Parmar were the runner-up in the GECTGOA badminton tournament (men's doubles category) organised on 19th October 2024. Faculty members from diploma degree and pharmacy institutes participated in the tournament.



**Prof. H. B. Vaghela and
Prof. Vaibhavi M Parmar
recieving trophy**

FACULTY DEVELOPMENT

FDP attended

• 01

**INDUSTRIAL
TRAINING**

• 16

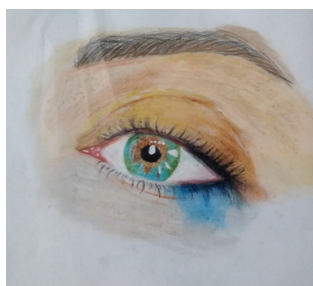
Student Spotlight

1. **Suthar Khush**, a 5th-semester Electrical Engineering student, secured the **1st rank in 4th-semester Electrical Engineering across Gujarat and holds the top rank across all branches within VGEC.**
2. **Pal Shubhajeet**, a 5th-semester Electrical Engineering student, secured the **5th rank in 4th-semester Electrical Engineering across Gujarat.**
3. **Shukla Shushil Manoj**, a 5th-semester Electrical Engineering student, secured the **10th rank in 4th-semester Electrical Engineering across Gujarat.**
4. **The Electrical Engineering Department at VGEC ranks 3rd among all engineering colleges in GTU, specifically within the Electrical branch.**

Full Name	Company Name	Package In LPA
Khilan Amritlal Ladani	Micron Semiconductor Technology India	13.17
Rushabh Jayantibhai Kaklotar	Newen System Pvt. Ltd.	4.5
Ankush Sanjay Roy	Newen System Pvt. Ltd.	4.5
Bhagya Kalpeshkumar Buch	Newen System Pvt. Ltd.	4.5
Harsh Bharatbhai Patel	Torrent Power Ltd	4.5
Harsh Anarkumar Shah	Torrent Power Ltd	4.5
Karan Narshibhai Bambhaniya	Torrent Power Ltd	4.5
Mohamadali Zakirhusain Nandoliya	Torrent Power Ltd	4.5
Jatin Rameshbhai Rathod	Torrent Power Ltd	4.5

Mityarajsinh Meghraisinh Jadeja	Torrent Power Ltd	4.5
Ravi Ganeshbhai Bumtariya	Torrent Power Ltd	4.5
Yogi Jitendrakumar Patel	Torrent Power Ltd	4.5
Satyam Kumar Pandey	Torrent Power Ltd	4.5
Md sabbir Moinuddin Ansari	Torrent Power Ltd	4.5
Dhruvish Shaileshbhai Parmar	Torrent Power Ltd	4.5
Sahil Chandreshbhai Bharadiya	Torrent Power Ltd	4.5
Smit Karshanbhai Kachhela	Torrent Power Ltd	4.5
Vivek Hareshkumar Suthar	Torrent Power Ltd	4.5
Shankumar Rameshbhai Chaudhary	Torrent Power Ltd	4.5
Shrusti Nitinkumar Bhatiya	Torrent Power Ltd	4.5

Creative Corner



SALONI RAJPUT (230170109116)