

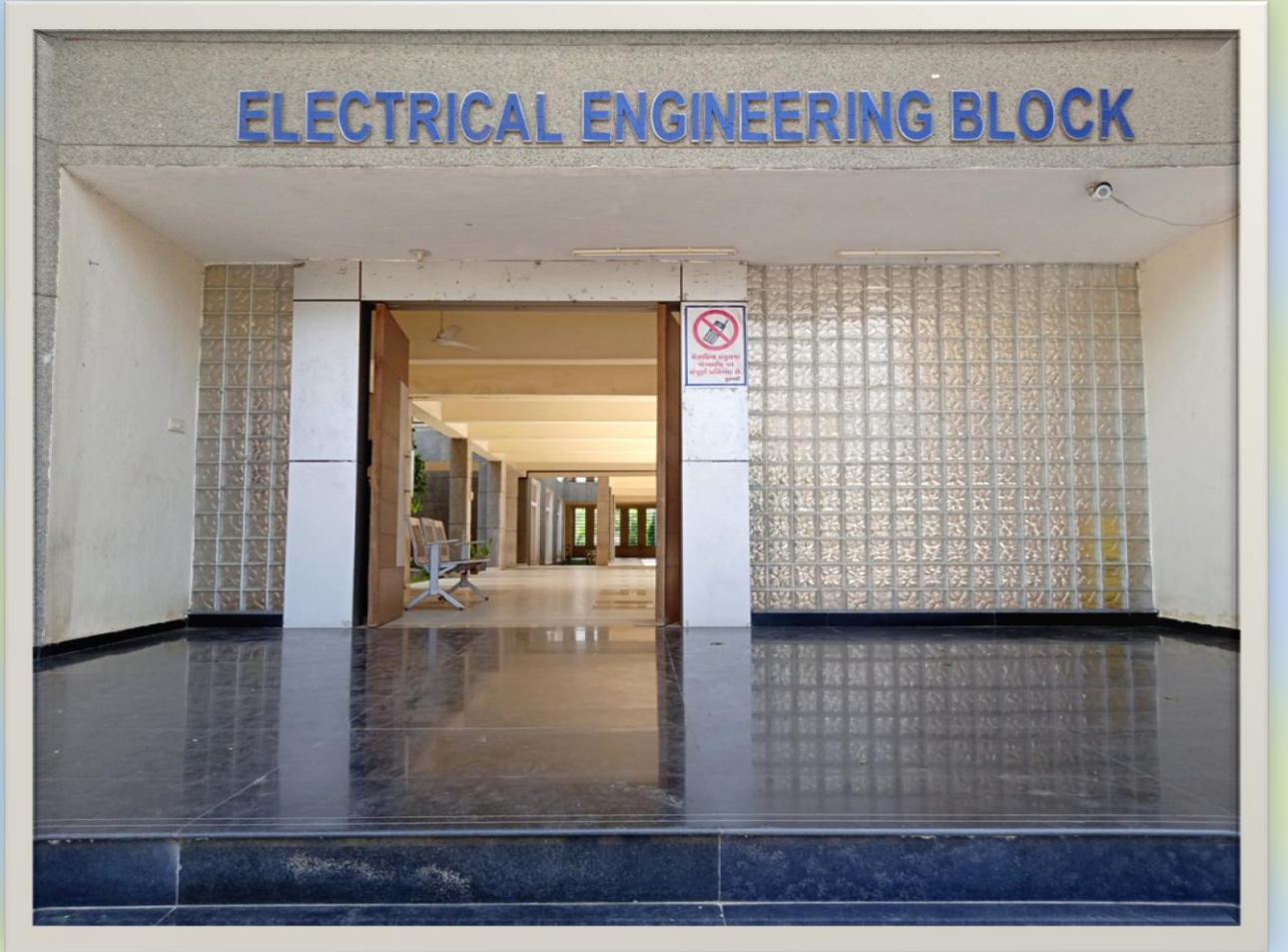
# Elect at Glance

E- NEWS LETTER

HALF YEARLY MAGAZINE

January-June - 2019

ELECTRICAL ENGINEERING DEPARTMENT  
GOVERNMENT ENGINEERING COLLEGE PALANPUR



Government of Gujarat

**GOVERNMENT ENGINEERING COLLEGE PALANPUR**

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### Newsletter Committee

Prof. B R Patel,  
Prof. M G Prajapati,  
Prof. H V Hirvaniya

### Contact us

## Electrical Engineering Department

Government Engineering College, Palanpur  
Jagana, Palanpur-Ahmedabad highway,  
Palanpur – 385011,  
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## Vision and Mission of Institute

### VISION

"To be a leading technical institute facilitating transformation of human resources into socially responsible engineering professionals for sustainable development"

### MISSION

- (1) To achieve academic excellence by developing state-of-the-art laboratories and academic infrastructure.
- (2) To create an ecosystem that promote value based technical education, innovation and entrepreneurship for sustainable development.
- (3) To contribute to industry and society by providing technical and consultancy services.
- (4) To enhance technical competencies of human resources by providing need base trainings and quality improvement programs.

## From the Desk of Head of Department

It's my honor to welcome you to the Department of Electrical Engineering and our great community of intellectual. The department of electrical engineering was established in 2009 along with the inception of the institute and is affiliated to the Gujarat technological university, Ahmedabad. The department is well equipped with all major laboratories like basic electrical engineering lab, electrical machine lab, control laboratory and others. We are a team of 11 highly qualified, dedicated and experienced faculty members who encourage the students to develop problem solving skills and research attitude.



The faculties of electrical department are actively engaged with colleagues in taking pivotal technical problems of society. We not only teach regular curriculum to the students, but also mentoring them regularly. Being a head of department i except each in his or her path should be a leader. The department has been blessed with many good students since its inception. Many of them are serving at good position in the industries and government sectors. Some of our students have preferred higher studies in the reputed Indian/foreign universities. We regularly arrange an industrial visit for our students to explore their practical skills. Our department is committed for providing excellence in classroom infrastructure, enrichment of the academic and professional experience of students, outreach to the engineering community and society, and advancement in electrical engineering. We are trying our best to transform the knowledge, wisdom, confidence, responsibilities, optimism, motivation, persistence, strong work ethic, self-advocacy, and awareness to our students.

## Innovation in Teaching Learning

Sr. No.	Methodology	Related subject	Class	Name of staff
1	Many practical's effectively performed through virtual lab developed by IIT Bombay.	Basic Electrical Engineering & AC Machine	4 <sup>th</sup> Sem	Prof. J.H.Patel

## Major projects

Sr. No.	Project Title	Name Of Guide
1	Design & Implementation of Control Panel For Three Phase Transformer	Prof. M G Prajapati
2	Design & Development of Control Panel For Single Phase Induction Motor	Prof. M G Prajapati
3	Over Current Protection Using Electro-Mechanical Relay	Prof. J H Patel
4	Remote Monitoring of Water Usage And Control Of Water Wastage	Prof. M.K. Patel
5	GUI Based Over current Relay	Prof. M.K. Patel
6	Relay Coordination of Over current Relay Using Etap Software	Prof. J H Patel
7	Design, Simulation And Analysis of Medium Transmission Line	Prof. A.M. Patel
8	Design And Construction of An Electric Bicycle With Regenerative Braking	Prof. N A Mistri
9	Raspberry PI Based Reader For Blind	Prof. M R Suneja
10	Simulation And Analysis of 220kV Substation	Prof. H N Chaudhari
11	Panel For Calculation of Regulation And Efficiency For Transmission Line	Prof. M D Patel/Prof. A.M.Patel
12	Solar Vehicle	Prof. H V Hirvaniya
13	Hand Gesture Based Motion Control Vehicle	Prof. M R Suneja

14	Over Current Relay Testing Kit	Prof. K G Prajapati
15	Coin Based Water Filling System	Prof. B R Patel
16	Three Phase Fault Analiser	Prof. K G Prajapati
17	Design, Development And Analysis of Inverter Control Ac Motors	Prof. H V Hirvaniya

## Best Three Major projects

### Project: 01

**Title: Solar Vehicle**

**Guide: Prof. H V Hirvaniya**

**Abstract:** Solar car is the best thing due to this the problem of non renewable energy as well as fuel issue will be solved. The major component of solar car is BLDC motor, Solar panel, Battery, Controller. Solar panel also known as photovoltaic cell that is used to convert solar energy to electrical energy. From the use of BLDC motor the car is run with smoother and with best efficient. Controller is uses for control the power, torque and speed of the motor so vehicle will run with needed speed not unnecessary requirement. The charge means electrical energy which is stored in Battery to use for run and best performance. The main use of this car in large campus and big industries for moving in one department to other with use of this car it will be easy.



### Project: 02

**Title: Design And Construction of An Electric Bicycle With Regenerative Braking**

**Guide: Prof. N A Mistri**

**Abstract:** An electric bicycle is a battery and BLDC motor operated vehicle that is economical with low maintenance cost and zero pollution. Electric bicycle use the electrical technology of rechargeable battery that converts electrical energy into mechanical energy. The battery of an electric vehicle can be charge easily using a power connection. The bicycle will also have regenerative braking capabilities when specified by users. The bicycle will use a brake-by-wire system to operate motor as a generator, simultaneously slowing the bicycle and recharging the battery the system we design will be such that most bicycle could be easily modified to include our system.



## Project: 03

**Title: Over Current Protection Using Electro-Mechanical Relay**

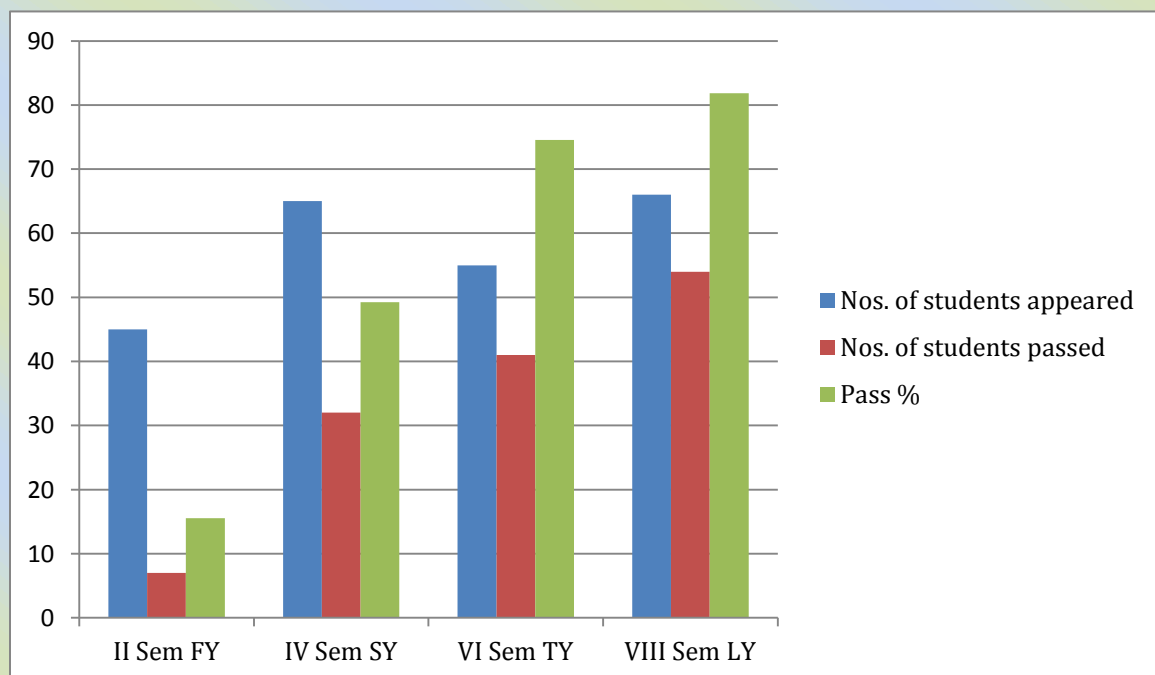
**Guide: Prof. J H Patel**

**Abstract:** Electrical power system network is mainly divided into three parts (i) Generation (ii) Transmission (iii) Distribution (iv) Distribution. Its open network where many types of fault occurs like L-G, L-L, L-L-L, L-L-L-G, L-L-G, TRANSIENT etc. To maintain reliability in the power system network it's necessary to remove such fault as quickly as possible. Electromechanical relay is first generation relay which can sense such fault and gives breaker a signal to isolate faulty part from the system. Our main objective of the project is to realise operation of over current protection using electromechanical type relay.



## Result Analysis

Summer - 2019		Nos. of students appeared	Nos. of students passed	Pass %
FY	II Sem	45	7	15.56
SY	IV Sem	65	32	49.23
TY	VI Sem	55	41	74.55
LY	VIII Sem	66	54	81.82



## Topper of Summer 2019 GTU Exam

### Top Three of 2<sup>nd</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	180610109002	BABU OMESH	8
2	180610109032	NAIR RAHULDEV MURALEEDHARAN	8
3	180610109062	VIRAMGAMI PRIYA SUDHIRKUMAR	8

### Top Three of 4<sup>th</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	170610109015	KUMAR SHUBHAM PRADEEP	9.03
2	170610109036	PATHAK DHRUV ARVINDBHAI	8.3
3	170610109061	VERMA RAVI PAVAN KUMAR	8.21

### Top Three of 6<sup>th</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	160610109016	GADHAVI MAYURKUMAR RAVIDAN	7.94
2	160610109021	KHAN RAHILKHAN A KADIRKHAN	7.84
3	160610109026	MODI BHAVESH SURESHKUMAR	7.77

### Top Three of 8<sup>th</sup> Semester

Sr. No	Enrollment No	Name	SPI
1	160613109005	GOND ABHISHEKKUMAR ASHOKKUMAR	9.48
2	150610109055	SOLANKI MAHENDRAKUMAR CHAMANLAL	9.34
3	150610109021	PANCHAL SAMIRKUMAR BABAULAL	9

## Training attended by Student

Sr. No	Name of Student	Enrollment No	Name of Industry	Duration	
				From	To
1	Bhoi Rahul	150610109004	Everlast Aluminium Pvt. Ltd.	01-01-19	15-01-19
2	Vyasmuni M. Padher	160613109009	Everlast Aluminium Pvt. Ltd.	01-01-19	15-01-19
3	Gond Abhishek	160613109005	Everlast Aluminium Pvt. Ltd.	01-01-19	15-01-19
4	Shubham Kumar	170610109015	L & T Construction	01-06-19	16-06--19

## Industrial Visit

4<sup>th</sup> and 8<sup>th</sup> semester students of Department visited Jagana village for Ruler Electrification situated in Palanpur on 04-05-2019. Total 117 students took benefit of this industrial visit. These students were accompanied by Prof. A M Patel and Prof. J H Patel



## Department Activity

Electrical Engineering Department of Government Engineering College Palanpur had organized An advanced training on “Electrical Vehicle” during 24/06/2019 to 29/06/2019, for enhancing the knowledge of Electrical engineering students in the field of electrical vehicles The training was conducted by Prof. H V Hirvaniya and Prof. M G Prajapati, Assistant Professor of Electrical Department, GEC Palanpur. In this training main topic which was covered are Introduction of EV, EV Modeling, Design consideration of EV, Selection of Motor for EV, BLDC motor and battery.



## Students Achievement

Sr.	Student Name	Enrollment No	Event	Event Date	Rank
1	Raval Hareshkumar Ambaram	150610109052	Kabbadi LCIT Bhandu	04-01-19	1 <sup>ST</sup>
2	Padher Vyasmuni Maheshbhai	160613109009	MIME MEC Basana	22-01-19	1 <sup>ST</sup>
3	Raval Hareshkumar Ambaram	150610109052	Handball LCIT Bhandu	09-02-19	1 <sup>ST</sup>
4	Devipujak Sanjaykumar	150610109008	Chess LCIT Bhandu	16-02-19	1 <sup>ST</sup>
5	Devipujak Sanjaykumar	150610109008	NFS LCIT Bhandu	16-02-19	1 <sup>ST</sup>
6	Jog Dipen Navinchandra	170610109008	Robotics MSU Baroda	23-02-19	3 <sup>RD</sup>
7	Joshi Nikhil Kamleshbhai	170610109011	Robotics MSU Baroda	23-02-19	3 <sup>RD</sup>

## Faculty Training

Sr. No.	Faculty	Training Title	Organizer	From	To
1	Prof.J.H.Patel	Induction Phase -1	NITTTR, Bhopal	31-12-18	11-01-19
2	K.G.Prajapati	Technological Advancements in Electrical Powersystem	DTE Gandhinagar	11-03-19	22-03-19
3	Prof H N Chaudhari	Technological Advancements in Power System	DTE Gandhinagar	11-03-19	22-03-19
4	H. V. Hirvaniya	Electrical Vehicle	LDCE Ahmedabad	11-03-19	15-03-19
5	Prof. M G Prajapati	Electrical Vehicle	LDCE Ahmedabad	11-03-19	15-03-19

## Research and Publication

- Patel, A. M., and Singal, S. K. (2019), "Optimal component selection of integrated renewable energy system for power generation in stand-alone applications", Energy,175(May 2019), 481–504.

## Department Faculty

<b>Sr. No.</b>	<b>Name of Faculty</b>	<b>Designation</b>	<b>Highest Qualification</b>	<b>Teaching Experience</b>
1	Prof. B R Patel	Assistant Professor	M.E.(Power System)	14
2	Prof. A M Patel	Assistant Professor	Ph.D. (Pursuing)	11
3	Prof. H N Chaudhari	Assistant Professor	M.E.(Power System)	08
4	Prof. H V Hirwaniya	Assistant Professor	M.Tech. (Electrical)	07
5	Prof. K G Prajapati	Assistant Professor	M.E.(Power System)	05
6	Prof. M G Prajapati	Assistant Professor	M.E.(Industrial Electronics)	06
7	Prof. M K Patel	Assistant Professor	M.Tech. (Electrical)	04
8	Prof. J H Patel	Assistant Professor	M.E.(Power System)	07
9	Prof. M R Suneja	Assistant Professor	M.E.(Power System)	06
10	Prof. N A Mstry	Assistant Professor	M.E.(Power System)	05