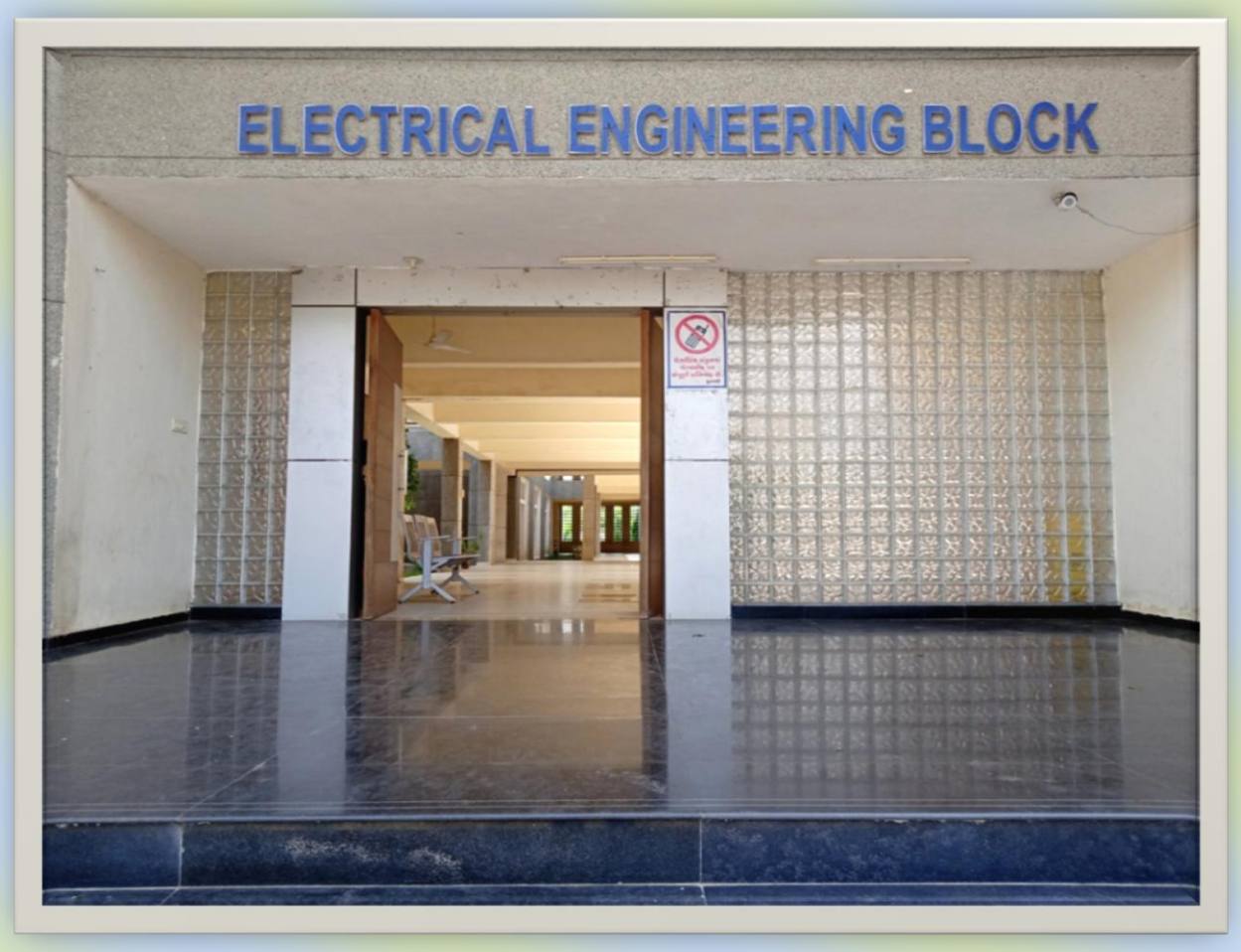
Elect at Glance

E- NEWS LETTER

HALF YEARLY MAGAZINE January - June 2018

ELECTRICAL ENGINEERING DEPARTMENT

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,
Gujarat, India

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 promotes 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 Practices in Teaching Learning

Sr. No.	Methodology	Subject	Class	Name of staff
1	Students are asked to perform simulation on various software.	EPS II	6th Electrical	Prof. K. G. Prajapati
2	Design a Starters and Transformer	Elements of Electrical Design	5th Electrical	Prof. M. R. Suneja

Major projects

Sr. No.	Project Title	Name Of Guide
1	Power Generation by Exaust Gases	Prof. H V Hirvaniya
2	Development of Tree Shaped Wind-Mill	Prof. H V Hirvaniya
3	Speed Control of Induction Motor Through Wifi With Android Application	Prof. F F Belim
4	Speed Control of BLDC Motor And Its Protection Using Zigbee Technology.	Prof. K G Prajapati
5	ACPWM Control For Induction Motor	Prof. N A Mistry
6	Water Cleaning And Tracking System of Solar Panel	Prof. N A Mistry
7	Protection Of Electrical Rail From Milestone Sliding	Prof. B R Patel
8	PWM Based Dc Voltage Converter Using H-Bridge	Prof. B R Patel
9	Solo Wind Hybrid Power Plant Using Vertical wind And Solar Tracker With Booster.	Prof. N A Mistry
10	Segway Personal Transformer	Prof. M D Patel
11	Design & Development Of Control Panel For Transformer	Prof. M G Prajapati
12	MOSFET Base Inverter	Prof. F F Belim

13	Electrical Portable Vehicle	Prof. H V Hirvaniya
14	Automation Of Home Fixtures With Feed bake System With Fire And Smoke Detector Safety	Prof. M R Suneja
15	Air Quality Pollution Monitoring And Control	Prof. M R Suneja
16	High Voltage Produced Using Tesla Coil	Prof. A A Patel
17	Solar Based Ups	Prof. A A Patel
18	Speed Control Of Three Phase Induction Motor Using MODBUS	Prof. K G Prajapati

Best Three Major projects

Project: 01

Title: Speed Control of Three Phase Induction Motor Using MODBUS
Guide: Prof. K G Prajapati

Abstract: All types of large industries uses induction motors for driving process equipment participating in their respective production line up. It is must to control the parameters like speed, on off switch and starting torque of these motors. Normally large industries have larger area in which more number of induction motors is used. If the controlling processes of the motors are automated using MODBUS, PLC and VFD whose settings are set accordingly by the users then the work and burden of the operators get reduced. In this paper the system is designed using MODBUS, where a slave device is placed in the land slots which acquire the data and send it to one main master device. The slave and master communicate through RS485 network using MODBUS protocol which is cheap and yet effective. So that user can monitor and control each and every node from the master itself. Through this we can able to control the speed, direction, start and stop torque of various induction motors.

Project: 02

Title: Development of Tree Shaped Wind-Mill
Guide: Prof. H V Hirvaniya

Abstract: This project is designed mainly for the generation of renewable electric power at every possible space in most convenient way. This type of wind turbine can be placed anywhere to generate electricity from low wind speed. In this project, all the small DC generators are arranged in tree like structure at the end of which leaves like structure which is aerofoil blades is placed. These leaves move with the low speed wind and generate electricity which is being saved in the batteries and this battery provides supply to load when necessary by the use of inverter. The project that we have made is primarily for the non-grid use, even though this project can also be designed for on grid too. This project is made mainly for to increases the convenience of the use of the renewable energy source. This project is a good combination of beauty of nature with the electricity generation which can be placed anywhere without expecting any side-effects.

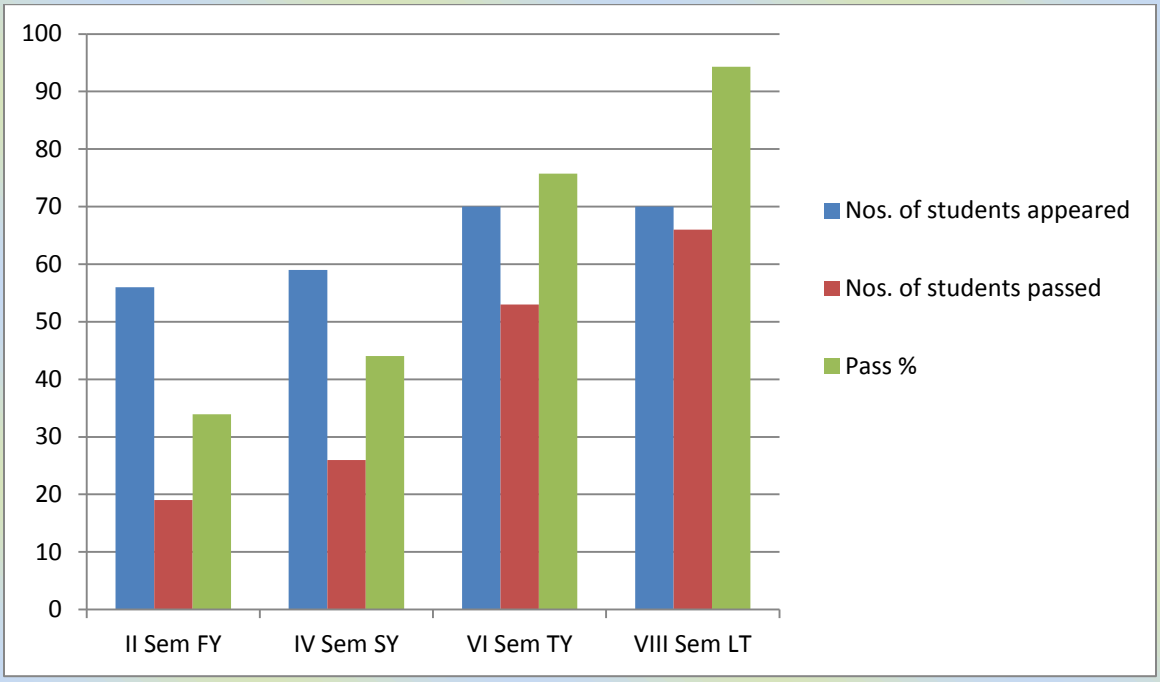
Project: 03

Title: Water Cleaning And Tracking System of Solar Panel
Guide: Prof. N A Mistry

Abstract: Solar panel has been used increasingly in recent years to convert solar energy to electrical energy. The solar panel can be used either as a stand-alone system or as a large solar system that is connected to the electricity grids. The earth receives 84 terawatts of power and our world consumes about 12 terawatts of power per day. We are trying to consume more energy from the sun using solar panel. In order to maximize the conversion from solar to electrical energy, the solar panels have to be positioned perpendicular to the sun. Thus the tracking of the sun's location and positioning of the solar panel are important. The goal of this project is to design an automatic tracking system, which can locate position of the sun. The tracking system will move the solar panel so that it is positioned perpendicular to the sun for maximum energy conversion at all time. Photo resister will be used as a sensor in this system. The system will consist of light sensing system, gear motor system and a solar panel. Our system will give more energy than solar panel without tracking system. The second part of this project is water cleaning system of solar panel. It is also another way to improve efficiency of system.

Result Analysis

Summer - 2018		Nos. of students appeared	Nos. of students passed	Pass %
FY	**II Sem**	56	19	33.93
SY	**IV Sem**	59	26	44.07
TY	**VI Sem**	70	53	75.71
LY	**VIII Sem**	70	66	94.29



Topper of Summer 2018 GTU Exam

Top Three of 2nd Semester

Sr. No	Enrollment No	Name	SPI
1	170610109036	PATHAK DHRUV ARVINDBHAI	8.58
2	170610109046	RATHOD BHAGIRATHSINH R	8.58
3	170610109015	KUMAR SHUBHAM PRADEEP	8.26

Top Three of 4th Semester

Sr. No	Enrollment No	Name	SPI
1	160610109021	KHAN RAHILKHAN A KADIRKHAN	8.52
2	160610109031	NANDANWAR RUTUL SUDESH	8.3
3	160610109016	GADHAVI MAYURKUMAR RAVIDAN	7.97

Top Three of 6th Semester

Sr. No	Enrollment No	Name	SPI
1	150610109030	PATEL KALPITKUMAR ASHOKBHAI	8.42
2	150610109055	SOLANKI MAHENDRAKUMAR CHAMANLAL	8.19
3	150610109011	GADHAVI RAVIRAJ MAHENDRADAN	8.16

Top Three of 8th Semester

Sr. No	Enrollment No	Name	SPI
1	140610109030	PANCHAL PARTH JAGDISHCHANDRA	9.21
2	140610109021	KUMAR VINOD DAYALAL	9.17
3	150613109004	PARMAR HITESHKUMAR PASHABHAI	9.03

Training attended by Student

Sr. No	Name of Student	Enrollment No	Name of Industry	Duration	
				From	To
1	Patel Bhautikkumar K	150610109026	Roquete Riddhi Siddhi Pvt. Ltd	24/02/2018	17/03/2018
2	Zala Sarvadeepsinh D	150610109062	Roquete Riddhi Siddhi Pvt. Ltd	24/02/2018	17/03/2018
3	Patel Rushabh J	150610109042	Roquete Riddhi Siddhi Pvt. Ltd	24/02/2018	17/03/2018
4	Patel Parth B	150610109036	GETCO, Patan	24/02/2018	17/03/2018
5	Patel Kalpit A	150610109030	GETCO, Patan	24/02/2018	17/03/2018
6	Patel Krunal H	150610109031	GETCO, Patan	24/02/2018	17/03/2018
7	Patel Sonukumar K	150610109044	GETCO, Patan	24/02/2018	17/03/2018
8	Patel Savan R	150610109043	GETCO, Patan	24/02/2018	17/03/2018
9	Patel Urveshkumar N	150610109045	GETCO, Patan	24/02/2018	17/03/2018
10	Patel Utsav V	150613109007	ONGC Mahesana,	25/05/2018	10/06/2018
11	Mevada Palakben M	140610109025	ONGC Mahesana,	25/05/2018	10/06/2018
12	Parmar Shirin G	140610109032	ONGC Mahesana,	25/05/2018	10/06/2018
13	Chauhan Manthan A	140610109006	ONGC Mahesana,	25/05/2018	10/06/2018
14	Panchal Parth J	140610109030	ONGC Mahesana,	25/05/2018	10/06/2018
15	Parmar Parth J	15061309005	ONGC Mahesana,	25/05/2018	10/06/2018

Sr. No	Name of Student	Enrollment No	Name of Industry	Duration	
				From	To
16	Parmar Hiteshkumar P	150613109004	ONGC Mahesana,	25/05/2018	10/06/2018
17	Patel Raj J	150610109040	ONGC Mahesana,	25/05/2018	10/06/2018
18	Zala Sarvadeepsinh D	150610109062	ONGC Mahesana,	25/05/2018	10/06/2018
19	Patel Meet J	150610109033	ONGC Mahesana,	25/05/2018	10/06/2018
20	Patel Rushabh J	150610109042	ONGC Mahesana,	25/05/2018	10/06/2018
21	Patel Parth V	150610109037	ONGC Mahesana,	25/05/2018	10/06/2018
22	Patel Parthkumar D	150610109038	ONGC Mahesana,	25/05/2018	10/06/2018
23	Patel Pavankumar S	150610109039	ONGC Mahesana,	25/05/2018	10/06/2018
24	Patel Bhautikkumar K	150610109026	ONGC Mahesana,	25/05/2018	10/06/2018
25	Patel Margin D	150610109032	Vasudev Power Pvt. Ltd.,	25/05/2018	10/06/2018
26	Kapadiya Saket L	150610109014	ONGC Mahesana,	25/05/2018	10/06/2018
27	Jani Priyank M	150610109012	ONGC Mahesana,	25/05/2018	10/06/2018
28	Darji Jay V	150614109001	ONGC Mahesana,	25/05/2018	10/06/2018
29	Kotteparmbil Vishnu S	140610109063	ONGC Mahesana,	25/05/2018	10/06/2018
30	Thakor Akshay V	140610109059	ONGC Mahesana,	25/05/2018	10/06/2018
31	Solanki Nikita D	140610109055	ONGC Mahesana,	25/05/2018	10/06/2018
32	Prajapati Mayurbhai G	140610109050	ONGC Mahesana,	25/05/2018	10/06/2018
33	Modh Ajay C	140610109026	ONGC Mahesana,	25/05/2018	10/06/2018
34	Prajapati Jigar G	140610109048	ONGC Mahesana,	25/05/2018	10/06/2018
35	Patel Vaishali D	140610109043	ONGC Mahesana,	25/05/2018	10/06/2018
36	Patel Shubham J	140610109042	ONGC Mahesana,	25/05/2018	10/06/2018

Industrial Visit

5th semester students of Department visited 220 KV substation, situated in sadarpur, Palanpur on 08-06-2018. Total 53 students took benefit of this industrial visit. These students were accompanied by Prof. M D Patel and Prof. N A Mistry.

Department Activity

Government Engineering College Palanpur had organized a seminar on April 17, 2018 (Tuesday) on " Industrial Automation" at the institute for enhancing the knowledge of Electrical engineering students of final and pre-final year. The seminar was conducted by the expert Mr. Rohit Sher who is Senior trainer Industrial Automation of Sofcon India Pvt Ltd. he explained theoretical concepts such as (1) General Introduction of Automation (2) General Introduction of PLC / SCADA (3) Allen Bradley PLC - basic introduction. he gave demonstration of Allen Bradley PLC, PLC to SCADA communication, Drive and Panel practical.

Students Achievement

Sr.	Student Name	Enrollment No	Event	Event Date	Rank
1	Joshi Chitraben Jayeshkumar	150610109013	Mehadi Completion, GEC	08-02-18	3rd

			Palanpur		
2	Mevada Tanvi Jayendrakumar	150610109019	Decoration Competition, GEC Palanpur	09-02-18	3rd
3	Ninama Smit Rameshbhai	150610109020	Kabbadi Sport GEC Palanpur	15-02-18	2nd
4	Raval Hareshkumar Ambaram	150610109052	Searsh X'8-E-Star LCIT Bhandu	16-02-18	1st
5	Raval Hareshkumar Ambaram	150610109052	Searsh X'8-NFS LCIT Bhandu	16-02-18	1st
6	Raval Hareshkumar Ambaram	150610109052	Search X'8-Carrom LCIT Bhandu	16-02-18	1st
7	Prajapati Kalpeshkumar A	150610109049	Searsh X'8-E-Star LCIT Bhandu	16-02-18	1st
8	Prajapati Kalpeshkumar A	150610109049	Seearch X'8-Electrical Workshop LCIT Bhandu	16-02-18	1st
9	Patel Sonukumar Kiritbhai	150610109044	Technigm 2K18-NFS SPCE Visnagar	20-02-18	4th
10	Chaudhary Sachinkumar J	170610109003	IGNIS 2018-Hand ball, SVNIT Surat	06-04-18	1st

Faculty Training

Sr. No.	Faculty	Training Title	Organizer	From	To
1	Prof. B. R. Patel	Effective Classroom Communication	NITTTR Bhopal	14/05/18	18/05/18
2	Prof. H. V. Hirvaniya	Recent Technical Innovation & Development in Electrical Engineering	CTE Gujarat	01/01/18	11/01/18
3	Prof. K. G. Prajapati	Recent Technical Innovation & Development in Electrical Engineering	CTE Gujarat	01/01/18	11/01/18
4	Prof. M. G. Prajapati	Recent Technical Innovation & Development in Electrical Engineering	CTE Gujarat	01/01/18	11/01/18

Research and Publication

1. Patel, A. M., and Singal, S. K. (2018), "Economic analysis of integrated renewable energy system for electrification of remote rural area having scattered population", International Journal of Renewable Energy Research, 8(1), 523–539.
2. H N Chaudhari "The Impact Of Distributed Generation on IEEE Bus System", International Journal of Advanced Engineering and Research Development Volume 5, Issue 1, January 2018

Department Faculty

Sr. No.	Name of Faculty	Designation	Highest Qualification	Teaching Experience
1	Prof. B R Patel	Assistant Professor	M.E.(Power System)	13
2	Prof. A M Patel	Assistant Professor	Ph.D. (Pursuing)	11
3	Prof. M D Patel	Assistant Professor	M.E.(Power System))	10
4	Prof. H N Chaudhari	Assistant Professor	M.E.(Power System)	07
5	Prof. H V Hirwaniya	Assistant Professor	M.Tech. (Electrical)	06
6	Prof. K G Prajapati	Assistant Professor	M.E.(Power System)	04
7	Prof. M G Prajapati	Assistant Professor	M.E.(Industrial Electronics)	05
8	Prof. M K Patel	Assistant Professor	M.Tech. (Electrical)	03
9	Prof. J H Patel	Assistant Professor	M.E.(Power System)	06
10	Prof. M R Suneja	Assistant Professor	M.E.(Power System)	05
11	Prof. N A Mstry	Assistant Professor	M.E.(Power System)	04