

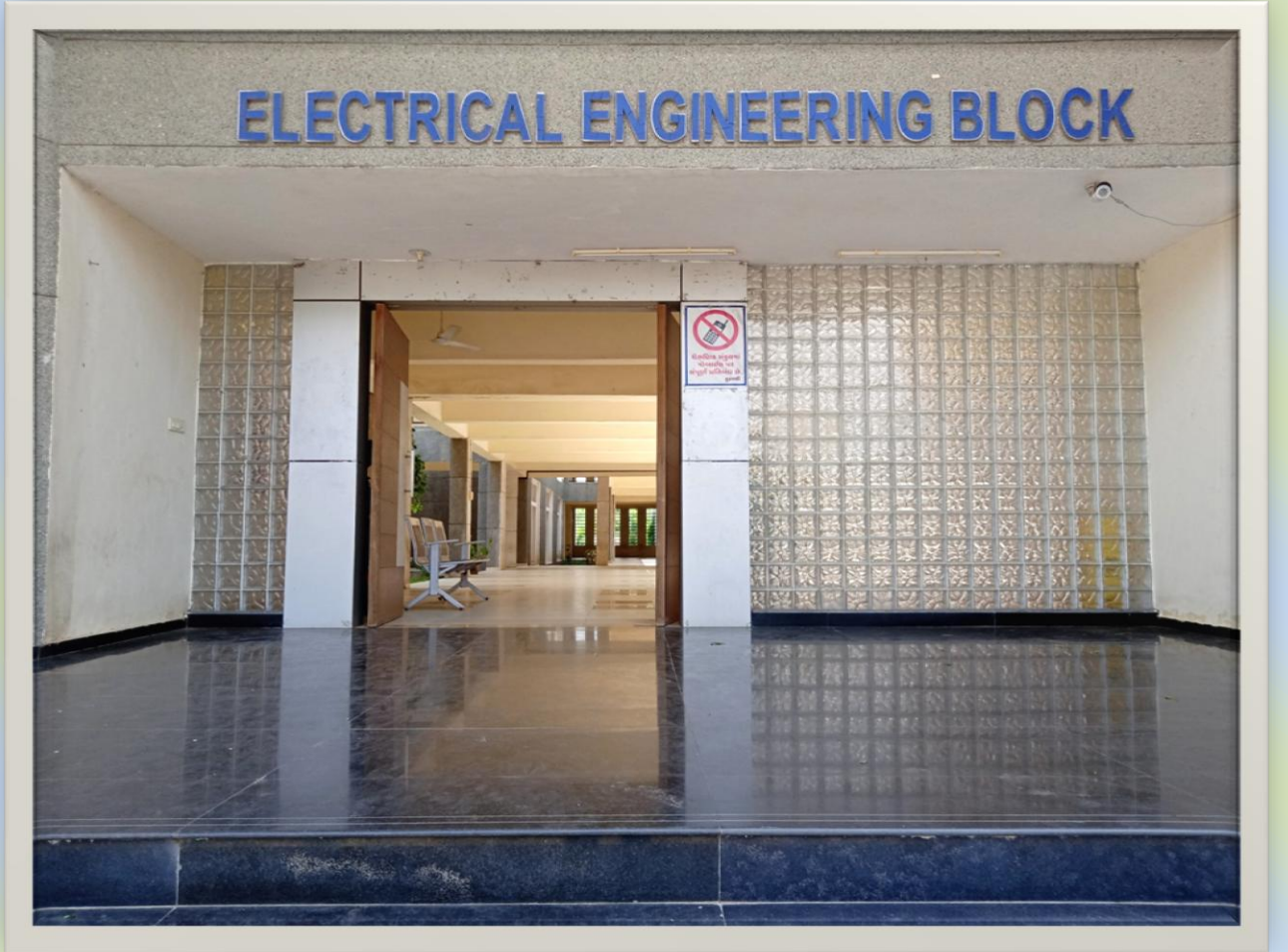
Elect at Glance

E- NEWS LETTER

HALF YEARLY MAGAZINE

January-June - 2020

ELECTRICAL ENGINEERING DEPARTMENT
GOVERNMENT ENGINEERING COLLEGE PALANPUR



Government of Gujarat

GOVERNMENT ENGINEERING COLLEGE PALANPUR

JAGANA, PALANPUR-AHMEDBAD HIGHWAY, PALANPUR - 385011, GUJARAT, INDIA

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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 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.

Vision and Mission of Department

VISION

"To develop competent electrical professionals for providing sustainable engineering solutions to society"

MISSION

- (1) To impart quality technical education with professional skills and human values.
- (2) To provide an eco-system that inculcates technical competencies for sustainable development.
- (3) To mentor students in pursuit of professional carrier and entrepreneurship.

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.

Innovative Practice in Teaching-learning/Assessment Process

Sr. No.	Methodology	Subject	Class	Name of staff
1	Google Classroom	PS-I	4th Sem.	Prof. A. M. Patel
2	Google Classroom	CED	6th Sem.	Prof M G Prajapati
3	Google Classroom	DDCMT	6th Sem.	Prof M G Prajapati
4	Google classroom	HVE	6th Sem.	Prf. M.K.Patel
5	Online Quiz	EPS II	6th Sem	Prof. K. G. Prajapati
6	Online Practical Viva Exam	CED	6th Sem.	Prof M G Prajapati
7	Google Classroom	UEET	6th Sem.	H. V. Hirvaniya
8	Google Classroom	PE	4th Sem.	H. V. Hirvaniya
10	Outcome Based Progressive Assessment	PS-I	4th Sem.	Prof. J.H.Patel
11	Outcome Based Progressive Assessment	PSOC	8th Sem.	Prof. J.H.Patel

Major projects

Sr. No.	Project Title	Name Of Guide
1	Vertical Axis Wind Turbine	Prof. N A Mistri
2	Electrical Power Generation From Stationary Bicycle	Prof. M G Prajapati
3	Ardino Based CNC Plotter Machine	Prof. J H Patel
4	Water Management System In GEC, Palanpur Hostel	Prof. M.K. Patel
5	Auto Cut Off Of 20 Hp Submercible Pump Based On Water Level In GEC, Palanpur	Prof. M.K. Patel
6	To Develop A Mechanism For Cleaning of Solar Pv Module	Prof. H N Chaudhary
7	RFID Based Student Attendance System	Prof. J H Patel
8	Smart Weather Station At GEC, Palanpur	Prof. M R Suneja
9	3 Phase Voltage Control Rectifier	Prof. B R Patel
10	Power Generation On Highway Using Vehicles Moment	Prof. H V Hirvaniya
11	Solar System Based Water Purification System	Prof. A.M.Patel
12	Solar Battery Charching System	Prof. H V Hirvaniya
13	Smart Irrigation System	Prof. K G Prajapati
14	Hooter System	Prof. M R Suneja

Best Three Major projects

Project: 01

Title: Electrical power generation from stationary bicycle

Guide: Prof. M G Prajapati

Abstract: The Intention of this project is to design a renewable energy source based around a piece of Exercise equipment. The Energy expended in a typical workout at the GYM is usually wasted in the Mechanics of the equipment this project harnessed the mechanical energy of the machine and converted it to Electrical energy using a Generator based system. The Exercise equipment attached to a shaft of the Generator. Thus, produced Electrical energy is using in powering a piece of equipment such as Lamp or a computer while exercising. This report will introduce the project and present all applicable information regarding the design development and the final product



Project: 02

Title: To Develop A Mechanism For Cleaning Of Solar Pv Module

Guide: Prof. H N Chaudhary

Abstract: Now a days electrical energy become a primary base of modern Civilization and backbone for sustainable development. Global energy consumption will increase day by day. The power crisis has become a major constraint to continued growth. Due to depleting nature and conventional source depending energy policy, it is necessary to find renewable energy sources. Solar power generation has a positive impact. The power output delivered by a photovoltaic module is depends upon the irradiation which reaches to the solar cell. The environment is directly affecting the photovoltaic performance. This project aims to increasing the performance of solar PV module by solving the problem of accumulation of dust on the solar panel. The dust accumulation reduce the plant output and over all plant efficiency. Our project purpose to develop a solar panel cleaning system, which could remove the accumulated dust on its surface and maintain the solar power plant output. We use a spraying system which could operate automatically and spray the water on the surface of solar panel. To control the on/off cycle of motor (pump), we use inbuilt timer interrupt of an Arduino and connect a relay to control the pump switching. We also done an analysis to measure the impact of soiling on the solar panel on 100kW solar



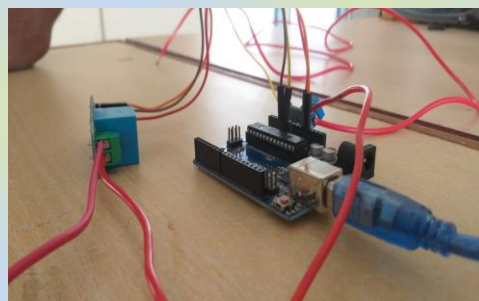
power plant at Government Engineering College, Palanpur. We compare energy generation of 30kW plant before cleaning and after cleaning at government engineering college palanpur

Project: 03

Title: Auto Cut Off Of 20 Hp Submersible Pump Based On Water Level In Gec, Palanpur

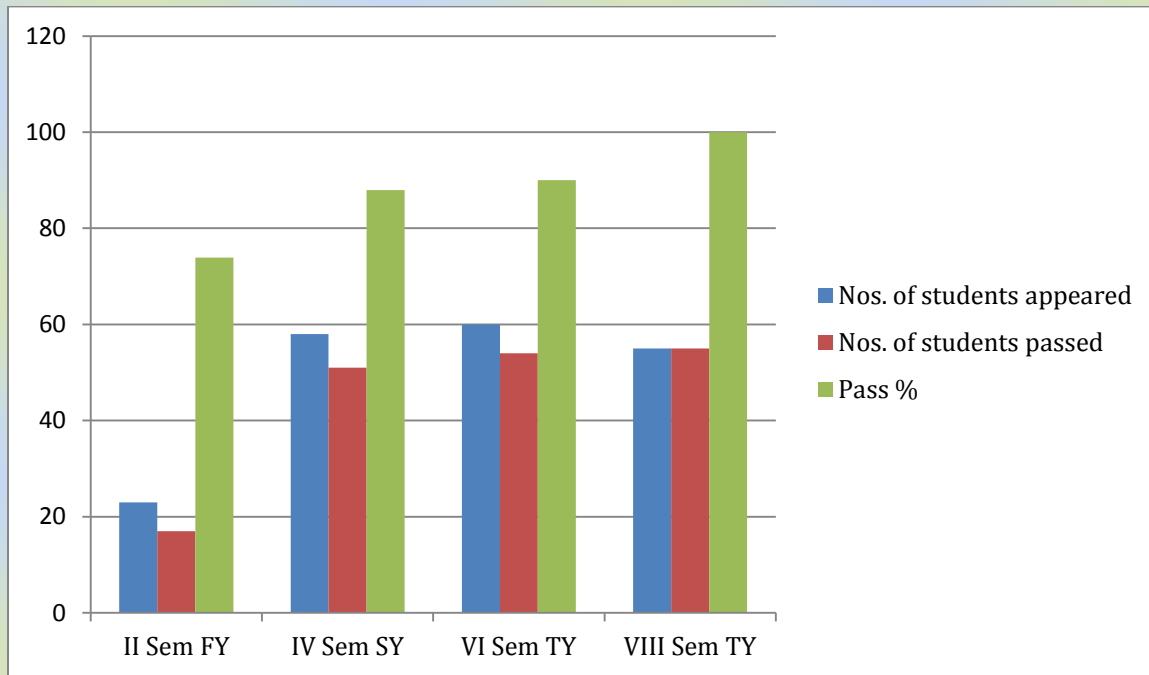
Guide: Prof. M.K. Patel

Abstract: As we all know that water wastage is a global issue, as there is only 1% of usable water present on earth. So it is necessary to use water efficiently. Many measures are taken for this problem, but we are willing to design a system which will serve two functions of saving electricity and water. In some conditions, while filling up the overhead tank, the water in the sump gets empty and the motor is still running which is waste of electricity and life of motor also decreases. To overcome above problem the motor will automatically turn off and alarm module will sound, which will give message to operator to fill up the sump. And if the overhead tank overflows then here is wastage of water. To overcome the above problem the solution is to build a module which is sensor based. This will generate a signal which will be given to the control unit which will trip the motor off



Result Analysis

Summer - 2020		Nos. of students appeared	Nos. of students passed	Pass %
FY	II Sem	23	17	73.91
SY	IV Sem	58	51	87.93
TY	VI Sem	60	54	90
LY	VIII Sem	55	55	100



Topper of Summer 2020 GTU Exam

Top Three of 2nd Semester

Sr. No	Enrollment No	Name	SPI
1	190610109008	JAGANIYA HITENDRAKUMAR VIRABHAI	8.55
2	190610109009	JOSHI CHIRAGKUMAR GIRISHKUMAR	8.55
3	190610109019	PATEL HARSHKUMAR RAJENDRAKUMAR	7.45

Top Three of 4th Semester

Sr. No	Enrollment No	Name	SPI
1	180610109012	DESAI DHARMIKKUMAR DEVANGKUMAR	8.52
2	180610109055	SINDHI MUHAMMADABUZAR MUNIRBHAI	8.13
3	180610109062	VIRAMGAMI PRIYA SUDHIRKUMAR	8.09
4	190613109001	ADHVARYU JITISH MITESHBHAI	8.09

Top Three of 6th Semester

Sr. No	Enrollment No	Name	SPI
1	170610109036	PATHAK DHRUV ARVINDBHAI	9
2	170610109010	JOSHI KESHAV SATYANARAYAN	8.77
3	170610109015	KUMAR SHUBHAM PRADEEP	8.61

Top Three of 8th Semester

Sr. No	Enrollment No	Name	SPI
1	160610109029	MODI RUTVIK V	10
2	160610109021	KHAN RAHILKHAN A K	9.69
3	160610109031	NANDANWAR RUTUL S	9.69

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

8th semester students of Department visited Power Grid Corporation of Ind Ltd, situated in Mudetha, Deesa on 13-02-2020. Total 48 students took benefit of this industrial visit. These students were accompanied by Prof. H V Hirvaniya, Prof. M G Prajapati and Mr. Manthan J Trivedi.



6th semester students of Department visited Power Grid Corporation of Ind Ltd, situated in Mudetha, Deesa on 14-02-2020. Total 54 students took benefit of this industrial visit. These students were accompanied by Prof. H V Hirvaniya, Prof. M G Prajapati and Mr. Manthan J Trivedi.



4th semester students of Department visited Gujarat Solar Park Charanka, situated in Patan on 19-02-2020. Total 55 students took benefit of this industrial visit. These students were accompanied by Prof. B R Patel and Prof. N A Mistri.



8th semester students of Department visited Load Dispatch Centre, situated in Gandhinagar on 14-02-2019. Total 52 students took benefit of this industrial visit. These students were accompanied by Prof. BA M Patel and Prof. J H Patel.



Department Activity

Electrical Department of Institute had organized mock drill for safety on 29/1/2020 at 03:00 PM. The purpose of mock drill is to improve the response of all stake holders in case of emergency like fire, building collapse or any natural calamity.



Electrical Engineering Department of Government Engineering College Palanpur had organized seminar on "To Arduino And Nodemcu" on 26/02/2020 for the students of electrical and mechanical engineering department. This Session was organized by the "Team Design Lab" to give introduction about Design Lab and to make aware the students about the recent trends in making automatic robots using different microcontroller like Arduino and NodeMcu. The Session is inaugurated by Prof. M.K.Patel by giving motivating speech and future aspects of learning new things. The Design lab Team Students has started explaining about the concept and usage of Arduino and NodeMcu. The total 103 Students were Present in this seminar of 2nd and 3rd Year Electrical and Mechanical Engineering



Faculty Training

Sr. No.	Faculty	Training Title	Organizer	From	To
1	Prof H N Chaudhari	FDP – Beyond the Classroom Towards Excellence	IITE, Gandhinagar	17/01/2020	23/01/2020
2	Prof. A. M. Patel	Non-Conventional Energy Resources	NPTEL	27/01/2020	17/04/2020

Department Faculty

Sr. No.	Name of Faculty	Designation	Highest Qualification	Teaching Experience
1	Prof. B R Patel	Assistant Professor	M.E.(Power System)	14
2	Prof. A M Patel	Assistant Professor	Ph.D. (Pursuing)	13
3	Prof. H N Chaudhari	Assistant Professor	M.E.(Power System)	09
4	Prof. H V Hirwaniya	Assistant Professor	M.Tech. (Electrical)	08
5	Prof. K G Prajapati	Assistant Professor	M.E.(Power System)	06
6	Prof. M G Prajapati	Assistant Professor	M.E.(Industrial Electronics)	07
7	Prof. M K Patel	Assistant Professor	M.Tech. (Electrical)	05
8	Prof. J H Patel	Assistant Professor	M.E.(Power System)	08
9	Prof. M R Suneja	Assistant Professor	M.E.(Power System)	07
10	Prof. N A Mstry	Assistant Professor	M.E.(Power System)	06