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Newsletter

Jan-June
2019

DEPARTMENT OF
ELECTRICAL & ELECTRONICS ENGINEERING

DEPARTMENTAL ACTIVITIES

Summer Training Program

" Training makes an Engineering student perfect." Electrical & Electronics Engineering Department is going to conduct semester break training for third year students.

"The more that you read, the more things you will know. The more that you learn, the more places you'll go."

Electrical & Electronics Engineering department announces intensive lab based summer training program for second year Electrical Engineering student from 1st of July 2019.

The trainings will be conducted on Electrical components, appliances, IR sensors & MATLAB for second year students.

SEMESTER BREAK TRAINING
Intensive Lab Based Summer Training Program

1st July onwards

Department of Electrical & Electronics Engg.

Hands on experience on electrical components, appliances and IR sensors and getting into MATLAB
2nd Year Students

B. Tech (Engineering) | M.Tech | B. Pharma | M. Pharma | MBA
Prof. Gajendra Gayakwad 9109975760, 9770844060 Gandhi Nagar & Ratibad Campus

SEMESTER BREAK TRAINING
Intensive Lab Based Summer Training Program

1st July onwards

Department of Electrical & Electronics Engg.

Exposure to Power Sector, Operation and Maintenance of power plant auxiliaries and sub-station
3rd Year Students

B. Tech (Engineering) | M.Tech | B. Pharma | M. Pharma | MBA
Prof. Gajendra Gayakwad 9109975760, 9770844060 Gandhi Nagar & Ratibad Campus

Smart wheel chair (Nirmaan-2018)

The smart wheel chair manufactured by Electrical engineering students which was designed specially for disabled person.

This advanced wheel chair has multiple control systems like keyboard control, motion sensor control and IOT control. It also has features like camera feed, robotic arm, GPS, obstacle sensors and commode system.

This smart wheel chair won second prize in Nirmaan-2018.

These kind of projects are highly helpful for students in enhancing their knowledge and learning application aspects of electrical components. Not only this but students also learn to manufacture a product of their own choice.



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Smart Wheel Chair

- Won 2nd prize in Nirmaan 2k18
- Hi-tech smart chair for disabled person
- Has 3 modes of control which are Joystick control, motion sensor control via headgear & by IOT control

Electrical Department

Expert Talk (4 June 2019)

The Electrical & Electronics Engineering department organized expert lectures and invited eminent people from industry like Prof. D.K. Dey who was previously the GM with B.H.E.L. and also associated with Jindal power limited and Dr. Pradyumn Chaturvedi from Vishvesvaraya National Institute of Technology, Nagpur.

These expert talks were focused on subjects like Power plant Generators and Multi-level inverters. Our experts from their vast industrial and academic backgrounds enlightened the students as well as the faculty members.

The aim of these expert talks is to firstly, ignite the students so that they also can become expert in their fields of interest and secondly bridge up the gap between industry and academics. Since the experts share their real time experiences and they also teach the students as to what the industry requires from them, so that they can start working on themselves.

An Expert lecture gives a break to the students from their continuous classroom classes and it brings a freshness in the students.



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Department of Electrical and Electronics Engineering

Expert Lecture

- ▶ Dr. Pradyumn Chaturvedi from Vishvesvaraya National Institute of Technology, Nagpur.
- ▶ Topic of the expert talk - "Multi-level inverters topologies and control strategies".

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Industrial Visits (31 May 2019)

Electrical Department organized industrial visits to Tawa Hydro electric power plant and Sarni Thermal power plant in the last academic session.

Here, we are sharing a glimpse of industrial visit by Second year students of Electrical Engineering to Tawa hydro electric power plant, situated at Tawa, M.P.

These industrial visits are aimed to provide an industrial exposure to learning engineering students. Only classroom teaching is an incomplete manner of education, and by organising visits to industries, the students learn about standard operating procedures of a real industry. The working professionals of industries share their real time experiences and challenges with the students which is priceless.

We hope that our students learn and grow and also enjoy such visits, because it is something different from daily classes. And we also intent to provide many more industrial visits to bridge the gap between academics and industries.



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Department of Electrical and Electronics Engineering

Industrial visit

- ▶ Tawa Hydro-electric power plant
- ▶ 2 units of 6.75 MW set up by LNJ Bhilwara group
- ▶ 2nd year students.



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Electro Spark 2k19 (10 May 2019)

The event was organized by Electrical department for all students, which focuses on basic electrical and electronics components and their use in designing of PCB circuits. This event is a fun way to learn about electrical engineering and its applications.

Conducted by:

Prof. Sitaram Raikwar, Prof. Shraddha Udygir



Group Photograph of Batch 2015-19

Group photograph of Final year Electrical Students.

All the Best to the Final year Electrical Engineering students.

We wish best of luck for the passing out students for their future endeavours.



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The best thing about memories is making them...



Department of Electrical and Electronics Engineering

2015-2019 Batch

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Industrial Visit (13 March 2019)

SISTec Department of Electrical & Electronics Engineering went on an Industrial visit to Tawa Hydro-electric power plant with the 2nd year Electrical Engineering students. It is a private sector hydro-electric generation power plant. The two units of 2×6.75 MW were set up by LNJ Bhilwara group. The generated Electrical power is transmitted to HEG plant, Mandideep via MPPTCL power line.

Students came to know the working of Hydro power plant and it's auxiliaries such as generating electrical power from generator with substation equipments to connect with the grid and related other details, also working of Hydro turbines.

The visit was very informative and the students enjoyed a lot, because this visit provided an opportunity to the Students to see the very source from where the electricity is generated.



Expert Lecture (8 Mar 2019)

The Department of Electrical & Electronics Engineering conducted an expert talk by inviting Dr. Pradyumn Chaturvedi from Vishvesvaraya National Institute of Technology, Nagpur. The expert shared from his rich experience of 17 years in the field of research and teaching.

Dr. Pradyumn Chaturvedi also holds the position of chairperson of joint chapter of IEEE, power electronics society and IEEE industrial electronics society under IEEE Bombay section.

The topic of expert lecture was "Multi-level inverters topologies and control strategies". The lecture was based on the fields of power electronics, which covers various applications like lighting ballasts, electric vehicles, induction heating, microwave oven battery charger and inverters.

This expert talk was very insightful for the electrical students as in today's modern world power electronic switches are used extensively in almost every electrical and electronic appliances.



Training session for electrical engineering students (9 Jan 2019)

Training session for 2nd year electrical students was conducted successfully today.

The theme of the session was 'Electrical Transformer-working & construction'. A comprehensive audio visual session was presented to make the students understand about the Transformer.

Moreover, A practical hands on session was conducted in which students themselves constructed the core of a 120VA transformer by using core stampings, not only this, the students also made a modification in the transformer by providing tapplings in the transformer which allows the transformer to deliver 3,6,12 and 24 volts individually.

This session gave the students a basic understanding of the transformer and its constructional aspects, which makes the students industry ready, as the transformer is a very versatile machine which is used almost at every place where the electricity is used.

Today Electrical department had successfully organized the semester break training for 1st year electrical students.



The forenoon session was on Basic Electrical and Electronic Components. Students learned about various electrical & electronic components which are used extensively in all circuits. They also learned how to solder different elements on a PCB.

In the afternoon session students learned about ratings of different components and also gained hands on experience on how to make an electrical circuit on breadboard using components such as resistors,LED's etc.

This training was the introductory session for electrical students to build their basic knowledge about the subject.And the hands on session gives a confidence to the students by enhancing the practical applications.



Today's training session theme was Electrical Measuring Instruments. Students of electrical first year learned about various electrical measuring instruments. This session gave an brief overview about electrical supply system and instruments used for measuring voltage,current & power.

The afternoon session was a practical hands on session in which students learned about how to measure electrical quantities like voltage,current & power, and moreover how to calibrate the measuring instrument.

As we know, Electrical measuring instruments are widely used in all industries, so a knowledge of these instruments and measurement is very crucial for an electrical engineer.

Day- 2 Training update #2nd_year

The 2nd year students of Electrical department underwent today's training session which was based on the theme of Power System, covering a variety of field like Electrical faults, relays, parallel operation, On Load Tap Changers etc.



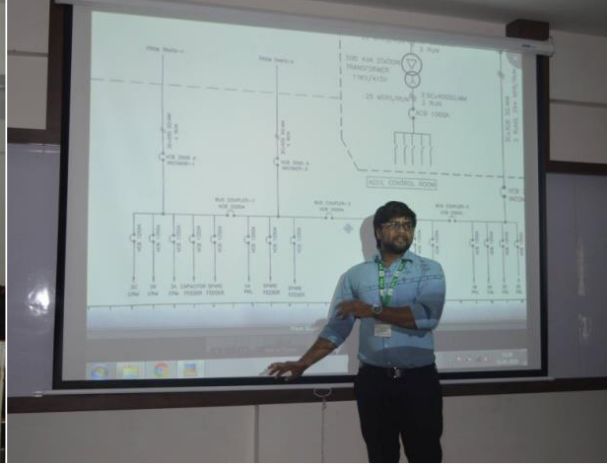
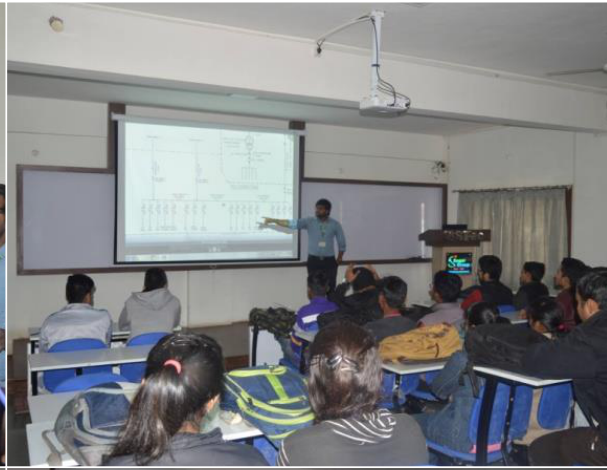
The forenoon session covered the topic of various Electrical faults which can occur in a power system network and transformers, and what are the protection schemes implemented to overcome these faults. The knowledge of electrical faults is of high importance from the point of stability and security of electrical grids.

In this session students also got an practical exposure of Differential relay, Buchholz relay, Overcurrent relay etc, which helped the students to better understand the complexity of the Electrical power system grid.

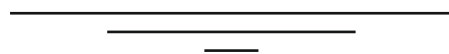
In afternoon session students viewed the demonstration of operation of Buchholz Relay. It is a safety device which is used for the protection of an Electrical Transformer, which we can see are installed on the poles from where we receive electricity at our homes.

Day- 3 Training update ~#1st_year_EX

The topic of today's forenoon session was " 220 volts AC to 12 volts / 5 volts DC regulated supply". In this session students learned about the process to convert AC power to DC power. Along with this they also learned the difference between unregulated and regulated power supply, voltage regulators, rectifiers etc.



And in the afternoon session students were given a hands on training and later on they themselves performed a practical to convert 220 volts AC power supply to 12 volts / 5 volts DC regulated power supply. After this they also learned to design Rectifier circuit and regulated DC supply on a PCB. This session proved to be very insightful session as to how does the electric circuits actually works. Design of electrical circuits and power supply is very crucial for electrical engineering students to understand the industrial electrical works.



STUDENT ACTIVITIES

Green house Efficient Building (28 May 2019)

The second year students of Electrical Engineering discipline participated in National level competition in which they designed a "Green house efficient building."

As we all know that climatic changes and ozone depletion are global problems which we are facing today. So to mitigate the effects of such environmental issues some measures has to be taken and to save the environment.

Students developed a model of green house efficient building which aims at saving the Electrical energy, as it fulfills its energy requirements by harnessing renewable energy sources like Sun and wind and thus reducing the fossil fuel consumption.

Not only this but the building also provides smart features like home automation system to control electrical utilities and smart parking system which displays the number of empty and occupied slots for vehicle users.

These kinds of smart and green projects are not only unique but they motivate the young engineering students to think out of the box and contribute their part for the betterment of the society and nature also.

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Department of Electrical and Electronics Engineering

Green house efficient building

- ▶ Operated by renewable energy sources
- ▶ Home automation system
- ▶ Smart parking

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Self sufficient smart city (24 May 2019)

An Idea is all you need for doing something big.

The 2nd year students of Electrical engineering came up with the idea of Self sufficient smart city, they applied this idea and made a descriptive model of a futuristic city.

A self sufficient city is a kind in which its building generate electricity for its occupants, and thus fulfilling their electricity demands. Not only this but it provides all kinds of automation systems with technologies like IOT, Bluetooth and infra red control making life easier and keeping you in pace with the fast city life.

A smart city is the one which also thinks about saving the environment, that is why this kind of city introduces Electric vehicles, so that fossil fuel dependency is minimised and there is lesser pollution.

We highly appreciate the students for their constructive thoughts and making projects like this in which they can showcase their skills.



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Department of Electrical and Electronics Engineering

Self sufficient Smart city

- ▶ Electrical Energy generation in the building itself
- ▶ IOT control, bluetooth control & Infra-red control
- ▶ Fossil fuel vehicles use minimised by introducing Smart electric bikes



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Bio-metric authenticated GPS enabled Smart cycle (20 May 2019)

Sharing a glimpse of a project by 2nd year students of Electrical department who devised a Smart cycle, which has many features like Advance gear system, GPS, Electronic motion control, bio metric authentication.

Students also participated in "Nirmaan" competition in which they won prize for their project.

These kind of projects are the need for the future, as they help in controlling the pollution, and moreover they are eco friendly.

We promote our students to always be visionary towards the future and use the technology for a better future.



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Department of Electrical and Electronics Engineering

Bio-metric authenticated GPS enabled Smart Cycle

- ▶ Advanced gear system
- ▶ GPS enabled for tracking and location
- ▶ Electronic control
- ▶ Bio metric lock for safety



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PLACEMENTS

The department of Electrical and Electronics Engineering congratulates Anupriya Kumari for getting placed on the position of Graduate Engineer Trainee. We extend our best wishes to her for future endeavours.



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Congratulations

ANUPRIYA KUMARI
Graduate Engineer Trainee
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The department congratulates Shrishti Sharma for getting placed on the position of Associate Engineer. We extend our best wishes to her for future endeavours.



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Associate Engineer
Waaree Solar
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The department congratulates Ashwini Navgire for getting placed on the position of IT Analyst. We extend our best wishes to her for future endeavours.

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Congratulations

ASHWINI NAVGIRE
IT Analyst
AMAZON
PACKAGE
2.8 LPA

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Congratulations to the selected students of Electrical and Electronics students. We wish you a bright future. Keep learning and growing.

Congratulations

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CTC
1.8 LPA

Campus Placement In:
JDS GROUP

Profile :
GRADUATE ENGINEER TRAINEE

Best Wishes For Your Bright Future...

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