

# SESSION JAN-JUNE 2022

### **4** SEMESTER BREAK TRAINING ON POWER DISTRIBUTION TECHNOLOGIES

By Dr. Ayush Shrivastava and Prof. Pankaj Sharma.

A wide range of topics were discussed as:-

Overview knowledge of bills, types of meter used, solution for defective meters Load Calculation and transformer overview & an overview of 220kV/132kV/33kV distribution system.



# **♣ SEMESTER BREAK TRAINING ON ENERGY DISTRIBUTION TECHNOLOGIES ② PDTC CENTRE**

Course Content of the session will be as follows:

- Overview knowledge of bills, types of meter used, solution for defective meters
- Load Calculation and transformer overview
- An overview of 220kV/132kV/33kV distribution system
- H.T metering and rooftop solar power generation and solar calculation
- Detection of faults in the transformer
- Discussion of switchgear and protection schemes
- SISTec (R,E) transformer section and their feeder assembly
- House wiring, staircase wiring with the help of two way and three-way switches
- Overview of MATLAB Simulink model
- Study of transformer oil testing and electrical machine fault



# SKILL BASED TRAINING PROGRAM

Department of Electrical Engineering
III Semester

3<sup>rd</sup> JANUARY 2022

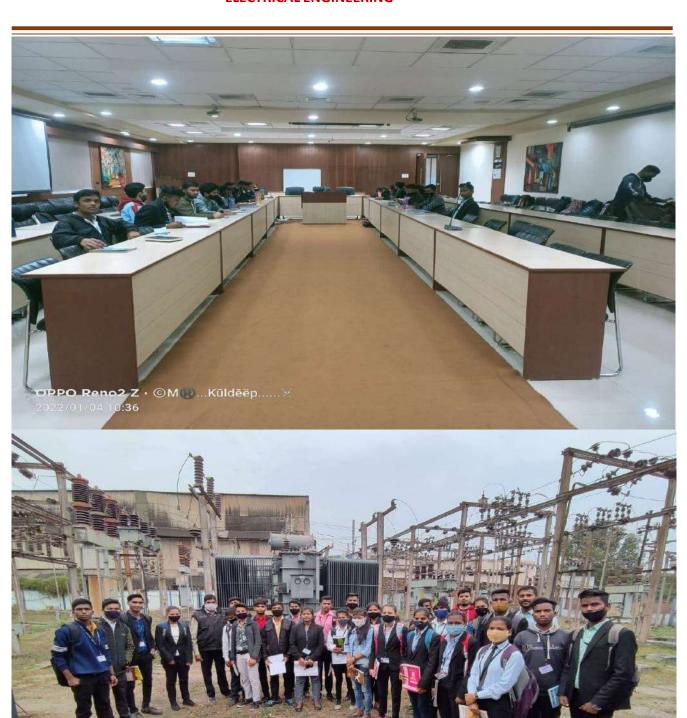
# Training Program

Program Coordinator : Miss Kavita Kushwah





- Overview knowledge of bills, types of meter used, solution for defective meters
- Load Calculation and transformer overview
- Introduction to operation & maintenance of 220kV/132kV/33kV distribution system
- H.T metering and rooftop solar power generation and solar calculation
- Revenue Management
- Detection of faults in the transformer
- Discussion of switchgear and protection schemes
- Hands on session Small Transformer repairing Unit (STRU)
- Study of transformer oil testing and electrical machine faults



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### **PYTHON FUNDAMENTAL TRAINING PROGRAM**

Department of Electrical Engineering, SISTec-E, Ratibad has successfully concluded 4 days Python fundamental training program 2021. In this program students have learned about the fundamentals of python. training provides the fundamental knowledge of python programming to students. On the last day of training, Quiz and feedback from students was taken. This program was conducted by expert Dr. Aayush Shrivastava.





### 🚣 INDUSTRIAL VISIT

SISTec Ratibad Department of Electrical Engineering successfully organized Industrial Training in Sagar Manufacturers Pvt. Ltd. (#SMPL) on 14th February 2022.

The purpose of this industrial visit was to give a platform where students can realize similarities between class learning and industrial applications. Students gained knowledge about the Yarn Manufacturing process, the role of Electrical Engineers in textile plant, working and controlling of different highly advanced machines and drives.

After the plant visit, a technical session was taken by Mr. A. M. Kathale (Chief Engineer, SMPL). At last, sir concluded this session with open discussion, in which students asked their queries.

As students shared their experience about this educational trip "it was a wonderful experience to see real engineering and experience why engineers are the backbone of our society".



### **♣** INAUGURATION OF DRONE CLUB

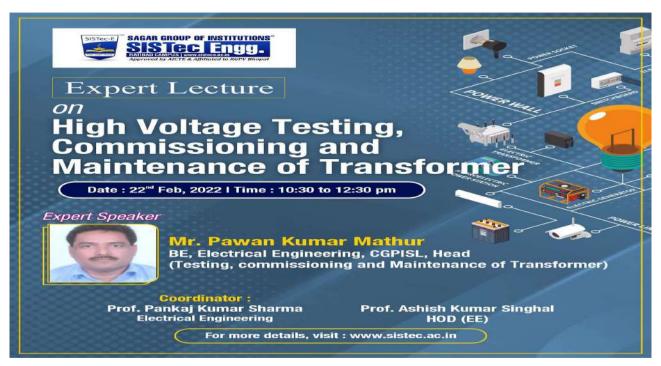
Inauguration of Drone Club to be held on 15th Feb'22 at 11:00 AM in SISTec-Ratibad, Bhopal. It will give us immense pleasure if you join us for the Inaugural Ceremony which is going to be conducted in online mode.



### **4** EXPERT LECTURE

Department of Electrical Engineering has successfully organized an Expert Lecture by Mr. Pawan Kumar Mathur on the topic "High Voltage Testing, Commissioning and Maintenance of Transformer".

The students of the Electrical Engineering department attended the expert lecture and learned so many new concepts regarding Transformer from an industry point of view which is beyond the RGPV syllabus.







### SKILL BASED TRAINING PROGRAMME

Department of Electrical Engineering, SISTec-E, Ratibad has successfully concluded 10 days Data structure using C programming training program 2022 for 4<sup>th</sup> semester students. In this program students have learned about the fundamentals of data structure. On the last day of training, Quiz and feedback from students was taken.





### **WORKSHOP ON IOT & ROBOTIC**

Department of Electrical Engineering has successfully organized the Workshop on "IOT & ROBOTICS" by Mr. ANKIT MULEY (Co-founder of infinity research Lab) from 02/03/2022 to 04/03/2022.

In these two days, students got the fundamental knowledge of IOT Technology, embedded system, IoT based experiments & Robot technology in Robot Manufacturing and wireless controlling of the robot. Students also made robots as an outcome of the workshop.







**♣** Congratulations to 8<sup>th</sup> Semester Raman Baghel for Lifting Final "Victory Cup" Man of the Match Cup of 19<sup>th</sup> Edition Of The "Shrimant Madhavrao Sciendia Memorial State Level Inter Engineering College Cricket Tournament"





**♣** Congratulations to All Students For Successful Completion of Certification Training by MSME On PLC\_Programming & By PDTC Bhopal





**CONGRATULATIONS to GAJRAJ AHIWAR (6th Sem) For Winning The Title of Branch Master** Department of Electrical Engineering has successfully organized and completed the Branch Master of Sagar Euphoria 2k22. In this competition Mr. Gajraj Ahirwar was won the title of Branch Master and got the prize money of 1500/-.



### **■** EXPERT TALK

Department of Electrical Engineering successfully organized an expert talk on "Renewable Energy, Energy Storage, and Electric Mobility Infrastructure" on 21st April 2022.

Four distinguished experts, Mr. Amit Jain, Director & Co-founder of Ener Qual Technology, Mr. Amit Raje, chairman and MD of aartechsolonics Limited ,Mr. Pinaki Bhattacharya and Mr. Dinesh shared their expertise. Students of 6th semester from EE, ME, EC were learners. Session was fully engaging, students actively participated and discussed their thoughts and queries.







♣ EXPERT SESSION ON DISCOVER & FLY WITH DRONE UNDER DRONE CLUB
Drone Club of Electrical Engineering Department has organized an expert session by Mr. Yashraj
Sunhare Co-founder of Jarvis Labs Pvt. Ltd. In this session, drone club member understands the
fundament of Drone technology, components of Drone. Students also took the session Flying drone.



### **♣** FAREWELL PARTY FOR BATCH 2K22

Department of Electrical engineering threw a rocking Farewell Party for 2022 passing out batch. 6<sup>th</sup> semester students bid adieu to their seniors. The evening was full of great enjoyment, and party games. The dance floor was jam-packed with students dancing their hearts out to the trending music. Lots of masti and a hell lot of fun were the only agenda for the day.



### **4** HEARTIEST CONGRATULATIONS FOR NPTEL CERTIFICATION

24 students from 6<sup>th</sup> semester have successfully completed the National Programme on Technology Enhanced Learning (NPTEL Course) on "Waste to Energy Conversion", with 7 of them got the Elite Certification under the guidance of Prof. Priyanka Rajawat, who was also certified for the Faculty Development Programme for the same course.







❖ 37 students from4th semester have successfully completed the National Programme on Technology Enhanced Learning (NPTEL Course) by IIT Madras on "Non-Conventional Energy Resources", with 8 of them got the Elite Certification under the guidance of Prof. Kavita Kushwah, who was also certified for the same course with Elite Certification.









### **♣** INNOVATIVE PROJECTS MADE IN ELECTRICAL ENGINEERING DEPARTMENT

### **❖ PROJECT NAME: ARDUINO BASED FIRE FIGHTING ROBOT**

<u>PURPOSE</u>: The main purpose of this fire fighting robot is that, save human life and it also save time because as compared to human it is very fast able and free from to injuries. According to the National Fire Protection Association, there were 29,130 injuries reported while fighting fire in 2015. These injuries are also coupled with 68 on-duty deaths. Injuries and casualties are the reason why safety professionals, the government and high-tech companies have come together in order to create fire fighting robots that can perform tasks too risky for people.



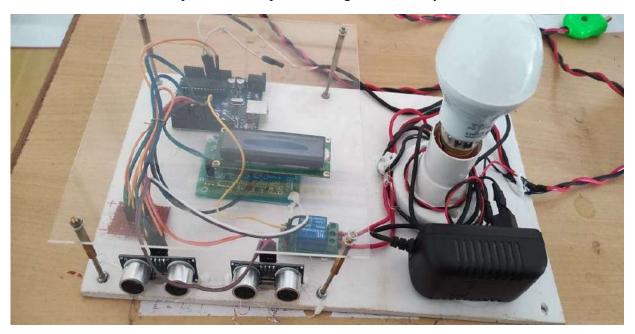
### **❖ PROJECT NAME:- MODEL OF ELECTRIC TRAIN**

<u>PURPOSE</u>: The main purpose of this electric train working model to demonstrate actual working of this complex system which is not possible even in industrial visit. This is a working model of electric train in which students demonstrated recent technologies which are using by Indian railway. As per data of Indian Railways 35,732 animals were killed on the railway tracks in the last four years. Students applied sensors for detection of animals and humans on railway track. Which help driver to take action for safety of animals. Some other technologies like antifog to make clear visibility of track in foggy weathers.



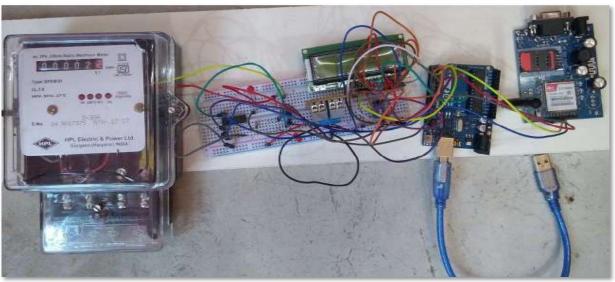
## **❖ PROJECT NAME: AUTOMATED POWER SAVING DEVICE FOR COMMERCIAL PURPOSE**

**PURPOSE:**-It is used to count the visitors of an auditorium, hall, room, offices, malls, sports venue, etc. This device is also used to save the power and help to reducing the electricity bill.



### **❖ PROJECT NAME: IOT BASED SMART BATTERY CHARGING STATION**

<u>PURPOSE</u>:- Design and develop an intelligent independent charging system for electric vehicles where it can charge and display charging car services with minimal disruption to users with the help of IoT. Need an Android app that transfers Battery Status, notify the user whenever the Cost Status exceeds the maximum amount, showing the charging stations closest to the monetization history whenever requested by the user.



### PROJECT NAME: SOLAR POWERED VACCINE STORAGE REFRIGERATOR

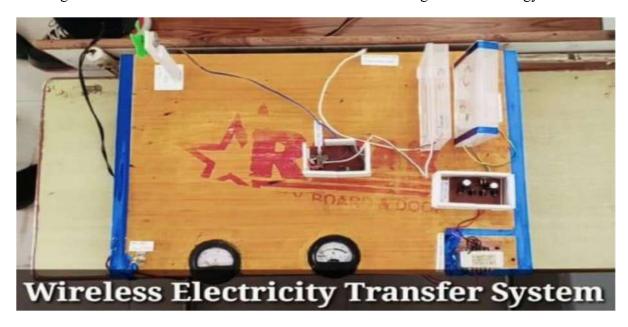
**PURPOSE:** There are several problems came around while storing the vaccines in refrigerator, This is a challenging situation that may bring disturbance in endurance of vaccine distribution all across the world. For this problem we've a solution where we can keep vaccines in a refrigerator that will maintain the temperature in required range. The cooling and storage unit was designed to be compact, portable, well isolated and to make use of a PV solar energy system as a source of electricity.



### **❖ PROJECT NAME: - WIRELESS ELECTRICITY TRANSFER SYSTEM**

**PURPOSE:-** In this era of moderation, electricity has become the un-avoidable part of life .The major source of conventional from of electricity is through wires. One of the major issues in power system is losses occurring during the transmission and distribution of electrical power The percentage of loss of power during transmission and distribution is resistant of wires used in grid. According to world resource institute (WRI), India's electricity grid has the highest transmission and distribution losses in the world whopping 27-40%. The concept of transmitting power wirelessly to reduce transmission and distribution losses. The wired distribution losses are 70 – 75% efficient. We cannot imagine the world without electric power which is efficient, cost effective and produce minimum

losses is of great concern. This PROJECT tells us the benefits of using WET technology.



### **❖ PROJECT NAME: - SMART ELECTRIC BIKE**

**PURPOSE:-** Electrification of the automobile fleet is seen as a critical component in tackling key environmental, transportation, and energy policy concerns by policymakers. In today's world, the government's key concern is to figure out how to reduce fossil fuel consumption and promote the use of electric vehicles in daily life. Electric motorcycles are plug-in electric vehicles with two wheels. The electricity is stored on board in a rechargeable battery, which drives one electric motors. This electric vehicle is cost effective, pollution free, effective in control and optimum in milage.



### **4** 100% PLACEMENT IN ELECTRICAL ENGINEERING DEPARTMENT

Round-Up Placements in Department of Electrical Engineering for Batch 2022, Witnessed 68 Companies in which resulted in **100**% **of placements** with the Highest Package of INR 12 LPA and an Average Package of INR 3.91 LPA.

