

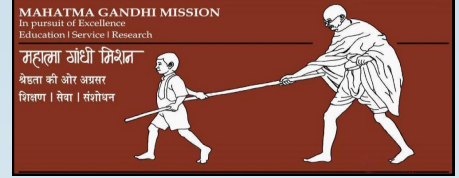
**ELECTRICA**

**NEWS LETTER**

**ELECTRICAL ENGINEERING DEPARTMENT**

## **MGM's POLYTECHNIC, AURANGABAD**

*Academic Year: A.Y. 2019-20, 02-03-2020*



### **VISION**

To develop competent electrical engineer acting as an asset for industry and society

### **MISSION**

- To disseminate knowledge by providing curricular and co-curricular activity
- To create technical manpower by interacting with industry
- To enrich the students with social awareness to serve the society.



### **What is in this issue?**

- Research Activity in Department
- FDP
- Industrial Visit
- Expert Lecture
- Visio-Polytech 2k20
- Social Activity

**RESEARCH ACTIVITY IN DEPARTMENT****A single phase to three phase converter with active input current changing which fed for small capacity ac motor drives****Abstract:**

This paper review on single phase to three phase converter having active or value of current changing which fed for alternating current fed motor drive is proposed & comparison with single phase parallel rectifier method, full bridge rectifier with full bridge inverter arduino based method & 3 phase rotary converter. Proposed converter utilized only six switches & implement active input current shaping feature which results in alternating input current at close to unity power factor & this method is better than the traditional methods. Front end rectifier convert AC to DC in the proposed converter & fed to 3ph invert via split capacitor DC link & provides efficient regulation against fluctuations in source voltage. This feature also give regenerative braking of the ac motor drive. An easy to implement control strategy to maintain near about unity power factor over the full operating range is detailed.



Prof. More S S  
(Lecturer)  
Electrical Engineering

***“One best book is equal to a hundred good friends, but one good friend is equal to a library” - Abdul KKalam***

**Single Phase to Three Phase System Using Dual Boost Converter to Drive Induction****Abstract:**

In this paper, we reflect the development of a system to trace the synchronization failure of any external supply source to the power grid on sensing the abnormalities in frequency and voltage levels. There are many power generation units inter-connected to the grid such as hydel, thermal, solar etc. to supply power to the load. These generating units having responsibility to supply power according to the rules and regulation of the grid. These rules involve maintaining a voltage variation within reference limits and also the frequency. So it is convenient to have a system which give alerts the grid in advance so that alternate arrangements are kept on standby to avoid complete grid failure. This prevents in large scale brown out or black out of the grid power. So, it is preferable to have a system which can warn the grid in advance so that alternate arrangements are kept on standby to avoid to total-grid failure. We are planning to implement microcontroller monitors and control the under/over voltage being derived from a set of comparators and a standard Arduino or control unit is used to vary the input voltage to test the functioning grid for proper synchronization .



Prof. Dhole P. P.  
(Lecturer)  
Electrical Engineering



## FDP AT ADANI DTPS, DAHANU

Aug.02,2019



YouCam

**FDP LOCATION:** ADANI DTPS, DAHANU

**DATE & SHEDULE:** 01-08-2019 To 03-08-2019 (3 DAYS)

**FDP TOPIC:** INTRODUCTION TO ELECTRICAL SOFTWARE'S

**LEARNING OBJECTIVES:**

- Study of thermal power plant based on coal

**NAME OF COURSE & CODE COVERED:** EPG & 22327



FDP



**L & T training centre, Pune**

Aug.19,2019



YouCam

**FDP LOCATION:** L& T, PUNE

**DATE & SHEDULE:** 19-08-2019 To 23-08-2019 (5 DAYS)

**FDP TOPIC:** INTRODUCTION TO ELECTRICAL SOFTWARE'S

**LEARNING OBJECTIVES:**

- To study Different Switch Gear Devices for Electrical Transmission Safety Such as Relay Protection, Circuit Breaker, Transformer-CT,PT, Conductor, etc

**NAME OF COURSE & CODE COVERED:** SAP & 22524

INDUSTRIAL VISIT



switchgear and protection

Sep.20,2019



YouCam

**VISIT LOCATION:** 220kV Substation, Bhenda MIDC

**DATE & SHEDULE:** 20-09-2020 (1 DAYS)

**LEARNING OBJECTIVES:**

- To study Different Switch Gear Devices for Electrical Transmission Safety Such as Relay Protection, Circuit Breaker, Transfromer-CT,PT, Conductor, etc

**NAME OF COURSE & CODE COVERED:** SAP & 22524



**INDUSTRIAL VISIT**



**VISIT TO HPS AT PAITHAN**

Sep.21,2019



YouCam

**VISIT LOCATION:** HYDRO POWER STATION MSPGCL, PAITHAN

**DATE & SHEDULE:** 11-8-2018 (1 DAYS)

**LEARNING OBJECTIVES:**

- Process of generation electrical energy using source as a water.
- Know about function and working of component of HPS like DAM, HEAD WORKS, SPILLWAYS, PENSTOCK, TURBINE, ALTERNATOR
- Study of Different Type of turbine.

**NAME OF COURSE & CODE COVERED:** EPG & 22327

**INDUSTRIAL VISIT**



**Roof Top Solar Power Generation**

Jul.20,2019



YouCam

**VISIT LOCATION:** MGM'S HOSPITAL , MGM's CAMPUS , N-6, CIDCO ,  
AURANGABAD

**DATE & SHEDULE:** 25-8-2018 (1 DAYS)

**LEARNING OBJECTIVES:**

- Identify need and importance of renewable energy sources like solar photovoltaic, solar thermal, etc.
- Apply concept of renewable energy for energy generation
- Generation of electricity with one time investment with minimum running expense & Low maintenance cost at running period.

**NAME OF COURSE & CODE COVERED:** ECA & 22525



**INDUSTRIAL VISIT**



**RTC MSCDCL AURANGABAD**

Jan.15,2020



YouCam

**VISIT LOCATION:** RTC, MSEDCL. AURANGABAD

**DATE & SCHEDULE:** 25-01-2020 (1 DAYS)

**LEARNING OBJECTIVES:**

- To study Different Switch Gear Devices for Electrical Transmission Safety Such as Relay Protection, Circuit Breaker, Transformer-CT,PT, Conductor, etc

**NAME OF COURSE & CODE COVERED:** EPT & 22419



**INDUSTRIAL VISIT**



**SOLAR POWER PLANT VISIT**

Jan.11,2020



2020-1-11 12:40

YouCam

**VISIT LOCATION:** MGM's POLYTECHNIC, AURANAGABD

**DATE & SHEDULE:** 11-01-2020 (1 DAYS)

**LEARNING OBJECTIVES:**

- Identify need and importance of renewable energy sources like solar photovoltaic, solar thermal, etc.
- Apply concept of renewable energy for energy generation
- Generation of electricity with one time investment with minimum running expense & Low maintenance cost at running period.

**NAME OF COURSE & CODE COVERED:**

- EPG & 22327 EPT & 22419

**INDUSTRIAL VISIT**



**VISIT TO MGM KHADI, MGM CAMPUS**

Sep.11,2019



YouCam

**VISIT LOCATION: KHADI CENTER AT JNEC, MGM CAMPUS**

**DATE & SCHEDULE: 11-01-2019 (1 DAYS)**

**LEARNING OBJECTIVES:**

- Different process of textile industries
- Process of making paithanies

**NAME OF COURSE & CODE COVERED: EDE & 22032**



**INDUSTRIAL VISIT**



**device electronics, pune**

Feb.14,2020



**VISIT LOCATION: DEVICE ELECTRONICS, PVT. LTD, PUNE**

**DATE & SHEDULE: 14-02-2020 (1 DAYS)**

**LEARNING OBJECTIVES:**

- Connection of electrical vehicle
- Types of Motors & Battery Pack

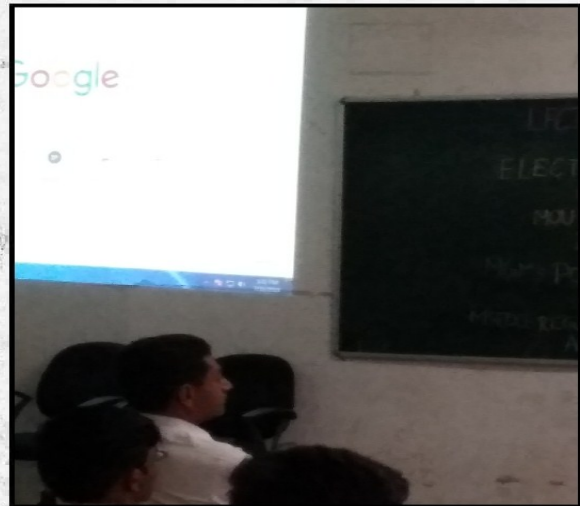
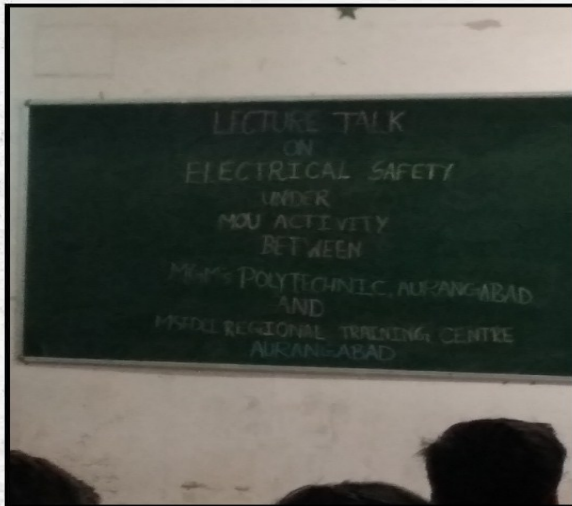
**NAME OF COURSE & CODE COVERED: ETE & 22628**

**EXPERT LECTURE TALK**



**Electrical Safety**

Jul.16,2019



YouCam

**LECTURE TALK TOPIC: ELECTRICAL SAFETY**

**DATE & SCHEDULE: 16-7-2019 (1 DAYS)**

**LEARNING OBJECTIVES:**

- To know about Electrical Safety Norms
- Study of Protective devices
- Causes of electrical accident and their precaution

**NAME OF COURSE & CODE COVERED:**

**EMWP & 22328**



**EXPERT LECTURE TALK**



**Lecture talk on Energy Conservation and Audit**

Sep.18,2019



YouCam

**LECTURE TALK TOPIC:** Energy Conservation and audit

**DATE & SCHEDULE:** 18-9-2019 (1 DAYS)

**LEARNING OBJECTIVES:**

- To Know About Energy Saving And Audit Concepts And Its Importance

**NAME OF COURSE & CODE COVERED:** ECA & 22525

**EXPERT LECTURE TALK**



**Switchgear & Protection**

Aug.16,2019



YouCam

**LECTURE TALK TOPIC: SWITCH GEAR & PROTECTION**

**DATE & SCHEDULE: 16-08-2020 (1 DAYS)**

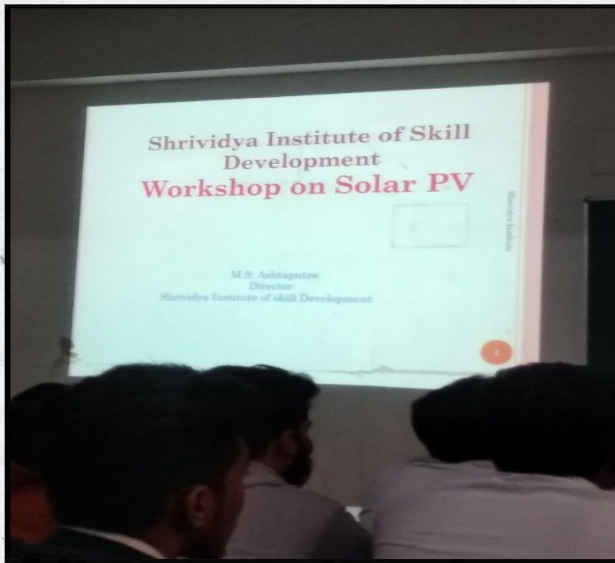
**LEARNING OBJECTIVES:**

- To study Different Switch Gear Devices for Electrical Transmission Safety Such as Relay Protection, Circuit Breaker, Transformer-CT,PT, Conductor, etc

**NAME OF COURSE & CODE COVERED: SAP & 22524**

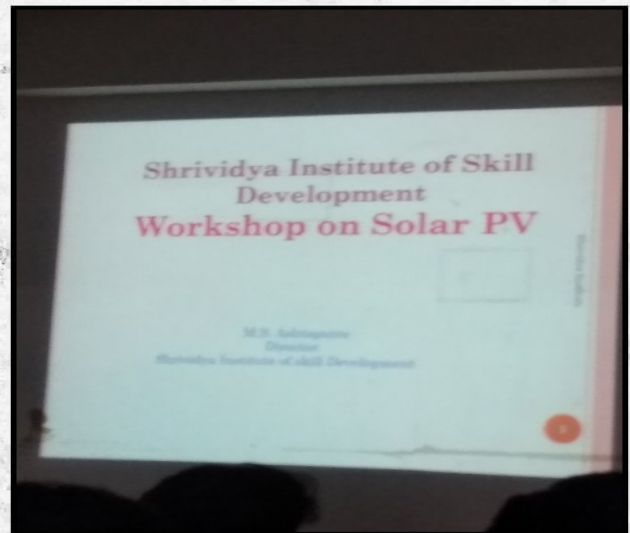


**EXPERT LECTURE TALK**



**SOLAR POWER PLANT DESIGN**

Dec.21,2019



YouCam

**LECTURE TALK TOPIC: SOLAR POWER GENERATION**

**DATE & SCHEDULE: 21-12-2019 (1 DAYS)**

**LEARNING OBJECTIVES:**

- Identify need and importance of renewable energy sources like solar photovoltaic, solar thermal, etc.
- Apply concept of renewable energy for energy generation
- Generation of electricity with one time investment with minimum running expense & Low maintenance cost at running period.

**NAME OF COURSE & CODE COVERED: EPG & 22327 EPT & 22419**

**EXPERT LECTURE TALK**



**LECTURE TALK TOPIC: INDUSTRIAL AUTOMATION**

**DATE & SCHEDULE: 19-07-2019 (1 DAYS)**

**LEARNING OBJECTIVES:**

- To Know About Basic Concepts About industrial Measurements, control & Automation

**NAME OF COURSE & CODE COVERED: IEM & 22420**



**PERSONALITY DEVELOPMENT PROGRAM**



**PERSONALITY DEVELOPMENT SESSION**

Feb.01,2020



YouCam

**PERSONALITY DEVELOPMENT TOPIC: PERSONALITY DEVELOPMENT & FUTURE OPPORTUNITIES**

**DATE & SCHEDULE: 01-02-2020 (1 DAYS)**

**LEARNING OBJECTIVES:**

- Personality development & confidence improvement also future opportunities in respective discipline

**NAME OF COURSE & CODE COVERED: EDE & 22032**

**PERSONALITY DEVELOPMENT PROGRAM**



**Communication & Confidence Building W/P**

Sep.13,2019



YouCam

**PERSONALITY DEVELOPMENT TOPIC: COMMUNICATION & PERSONALITY DEVELOPMENT**

**DATE & SCHEDULE: 13-09-2019 (1 DAYS)**

**LEARNING OBJECTIVES:**

- Personality development & confidence improvement also future opportunities in respective discipline

**NAME OF COURSE & CODE COVERED: EDE & 22032**



**WORKSHOP**



**WORKSHOP ON SOLAR POWER DESIGN**

Jan.10,2020



YouCam

**WORKSHOP TOPIC: SOLAR POWER PLANT DESIGN**

**DATE & SHEDULE: 10-01-2020 (1 DAYS)**

**LEARNING OBJECTIVES:**

- Identify need and importance of renewable energy sources like solar photovoltaic, solar thermal, etc.
- Apply concept of renewable energy for energy generation
- Generation of electricity with one time investment with minimum running expense & Low maintenance cost at running period.

**NAME OF COURSE & CODE COVERED: EPG & 22327 EPT & 22419**



**WORKSHOP**



**MOTOR WINDING WORKSHOP**

Aug.13,2019



YouCam

**WORKSHOP TOPIC: MOTOR WINDING WORKSHOP**

**DATE & SCHEDULE: 13-08-2019 (1 DAYS)**

**LEARNING OBJECTIVES:**

- Types winding
- Motor Winding & Connection

**NAME OF COURSE & CODE COVERED: EMWP & 22328**



**SOCIAL ACTIVITY**



**Tree Plantation At Nirgudi Under NSS**

Jul.27,2019



**Blood Donation Camp At Mgm**

Sep.14,2019



**COMMUNITY POLICING DAMINI PATHAK**

Jan.08,2020

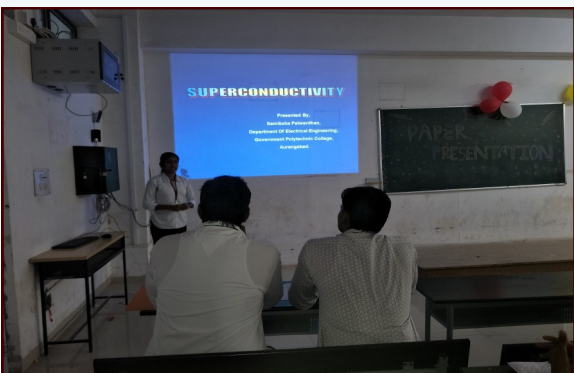
**VISIO POLYTECH 2K20**



**TECHNICAL QUIZ COMPETITION**



**POSTER PRESENTATION COMPETITION**



**PAPER PRESENTATION COMPETITION**



**SARSWATI PUJAN OF EVENT**



**PROJECT COMPETITION**

It is a state level technical event in which every year we organize various technical events. This year Visio-Polytech 2K20 consist of Four events in department namely Project Competition, Paper Presentation, Poster Presentation, Quiz Competition.

This event is specially designed for Junior college, ITI and Polytechnic students. This event helps to bring the students together across the state and promotes innovative and latent qualities in them. Visio-Polytech 2k20 is a platform where students pave ways to their creativity by showing their presentation skills.



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**Ω THANK YOU Ω**