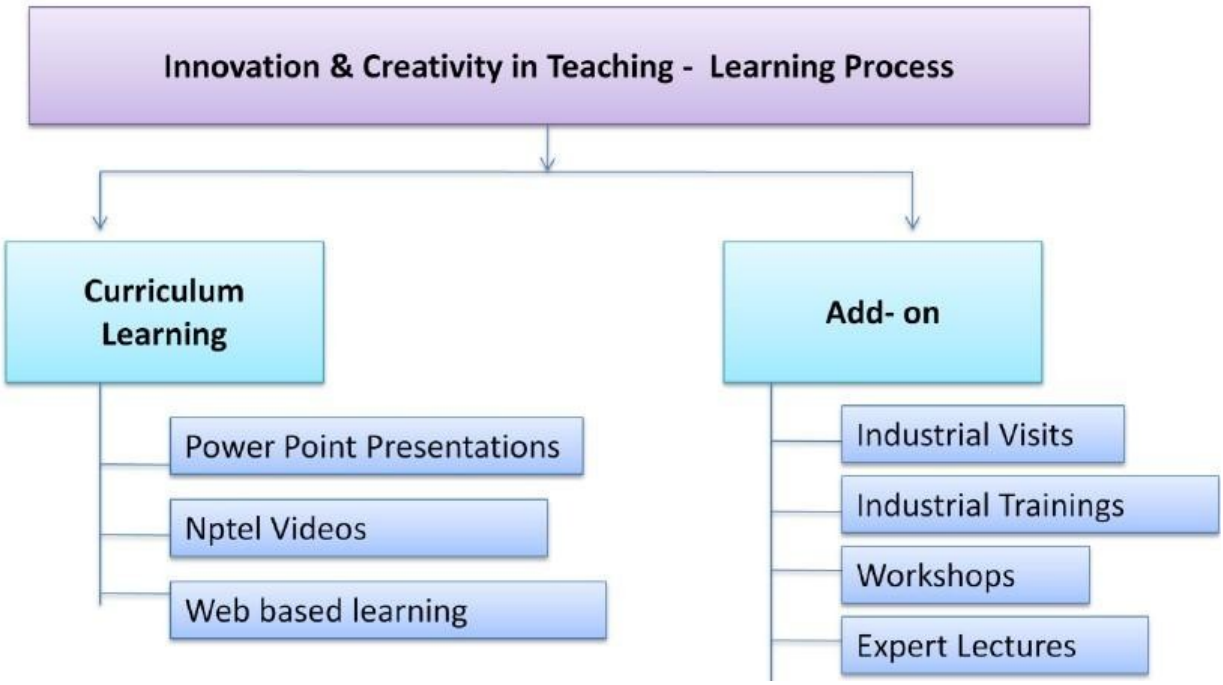
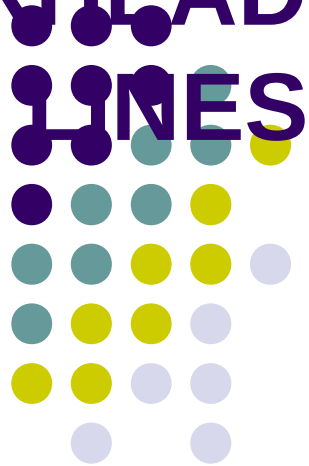
2.3.4 Innovation and Creativity in teaching- learning



EE 301-POWER GENERATION,TRANSMISSION&PROTECTION

MODULE 3

MECHANICAL DESIGN OF OVERHEAD LINES



Fareeda A Kareem,
Assoc Prof,KMEA ,Edathala

COURSE PLAN

Introduction of Overhead transmission and underground transmission

Conductors -types of conductors -copper, Aluminium and ACSR conductors -Volume of conductor required for various systems of transmission-Choice of transmission voltage, conductor size -Kelvin's law.

Mechanical Characteristics of transmission lines – configuration-Types of Towers. Calculation of sag and tension-supports at equal and unequal heights -effect of wind and ice-sag template

Insulators -Different types -Voltage distribution, grading and string efficiency of suspension insulators. Corona -disruptive critical voltage -visual critical voltage -power loss due to corona -Factors affecting corona - interference on communication lines.

Overhead line underground cable

Components

- Supports
- Conductors
- Cross arms and clamps
- Insulators
- Guys and strays
- Lightning arrestors
- Fuses and isolating switches
- Vee guards
- Guard wires
- Phase plates
- Bird guards
- Danger plates
- Barbed wire
- Mischallaneous items

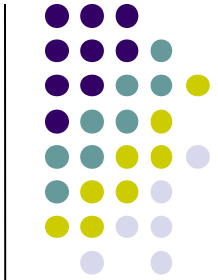
Line supports

- Give the support to the conductors

Requirements

- 1)High mechanical strength to withstand the weight of conductors and wind load etc.
- 2)Light in weight without the loss of mechanical strength.
- 3)Cheaper in cost
- 4)Low maintenance cost
- 5)Longer life
- 6)Good looking
- 7)Easy accessibility for painting & erection of line conductors.

Types



1) Wooden poles

- Cheapest, easily available and have insulating properties.
- Used for distribution in rural areas.
- Double pole structures of A or H type is commonly used.
- Use is limited to low pressures and short spans.
- Tendency to route below the ground level ,causing foundation failure ,in order to prevent this portion of the pole below the ground level is impregnated with preservative compounds like CREOSOTE OIL.
- Comparatively smaller life.
- Less mechanical strength.
- Periodical inspection is required.

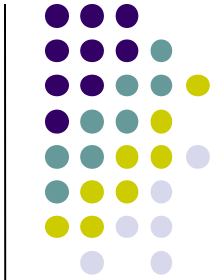
2)Steel Poles

- Possesses greater mechanical strength
- Permit use of longer spans
- Higher cost
- Longer life (can be improved by regular painting)
- Used for distribution purposes in the cities

3 types

- Tubular poles
- Rail poles
- Rolled steel joists

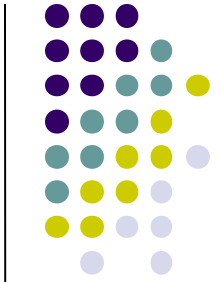
3)Reinforced Concrete Poles



- RCC poles,used for low voltage and high voltage distribution upto 11 kV
- Greater mechanical strength,longer life,permits longer spans
- Giving good look
- Require little maintenance
- Good insulating properties
- Very popular

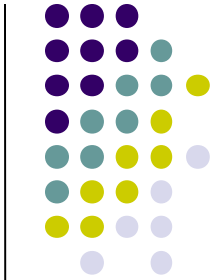
Wooden, steel, RCC poles are used for distribution purposes at low voltage up to 11 kV

4)Lattice steel towers



- Employed for long distance transmission at high voltage
- Greater mechanical strength
- Longer life
- Permitting longer spans

Conductor materials

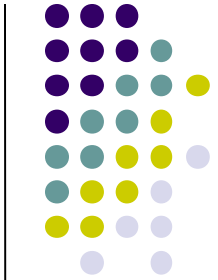


- Carry electric power from sending end station to receiving end station

Characteristics

- high electrical conductivity
- high tensile strength
- low specific gravity in order to give low weight per unit volume
- low cost in order to be used over long distances
- easy availability
- should not be brittle

Common materials used



1)Stranded hard drawn copper

- high electrical conductivity
- high tensile strength
- high current density
- durable, having high scrap value
- long life
- higher cost & non availability

2)Aluminum

- cheapest in cost & lighter in weight
- poor conductivity & tensile strength
- low melting point, can't withstand short circuit

TYPES

- Aluminum Conductor Steel Reinforced (ACSR)
- All Aluminum Conductor (AAC); It is used in construction that requires good conductivity and short spans.
- All Aluminum Alloy Conductor (AAAC) :It is stronger than ACSR, and lighter, but more expensive. It is used for long spans in corrosive environments.

3)Steel Cored Aluminum (ACSR)

- high tensile strength, lighter in weight
- produces small sag , longer spans can be used
- reduced corona losses, reduced cost
- saving in maintenance cost

4)Galvanised steel

- for longer spans or for short lines exposed to normally high stresses.
- used for supplying in rural areas & operating at voltages about 11kV
- Not suitable for EHT lines

6)Copper clad steel

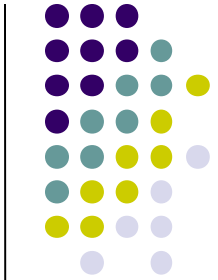
- Welding a copper coating on steel wire
- large tensile strength
- for longer spans

7)Phosphor bronze

- Phosphor bronze added to cadmium copper
- useful for long spans and when harmful gases like Ammonia is present in the atmosphere.

The most common type of transmission conductor is ACSR. ACSR consists of one or more layers of aluminum strands surrounding a core of 1, 7, 19, or 37 galvanized steel strands

Conductor configurations and spacing

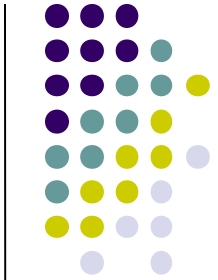


- Horizontal, vertical & triangular configurations
- Spacing =√S +V/150 m

  S =sag in meters

  V =line voltage in kV

Span length



- With wooden poles :-(40-50)m
- With steel tubular poles :-(50-80)m
- With RCC poles :-(80-200)m
- With steel towers:-(200-400)m&above

Vibration & Dampers

- There will be vibrations in an overhead line in the vertical plane.That may be due to

  - normal swinging in the wind

  - high frequency vibrations/resonant vibrations(20-50mm,5-100Hz)

  - low frequency vibrations/galloping/dancing(6m,1Hz)

- Simple swinging is harmless provided the clearance is sufficiently large.
- Low frequency vibrations occur during storms or with a strong wind.The conductors are said to dance.There is no method for preventing these vibrations.

- Danger can be reduced if horizontal conductor configuration is used.
- The conductors are protected by dampers for preventing resonant vibrations
- Damper means two weights attached to apiece of stranded cables,clamped to the conductor.Energy of vibration is absorbed by the stranded cable.

Cross arms

- To keep the conductors at a safe distance from each other and from the poles
- Also used for to support the insulators
- Types are MS-Channel,U-shaped,V-shaped, Zig-zag

Insulators

- For supporting the conductors
- May be pin, strain ,suspension type

Guys and stays

- Cables to resist lateral forces

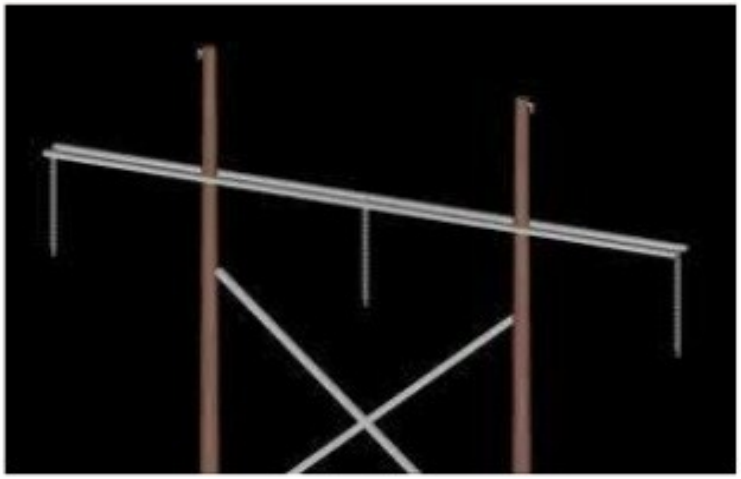
Lightning arrestors

- To discharge excessive voltage on the line to earth, due to lightening

Fuses & Isolating switches

- To isolate different parts

2. CROSS ARM AND CLAMP

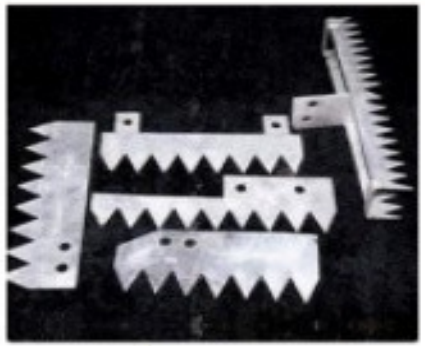


9. GUARD WIRE

When a power line, telephone or telegraph line crossing, and then find the line that connects the top and bottom of the Earth Wire is used to guard.

10. BIRD GUARDS

It is created on the side of the saw teeth as long ebonite basest plate, which is a cross - is prevented in the presence of arm insulator. The birds of hokier cross - in the arm and conductor Flash - Over in the out .



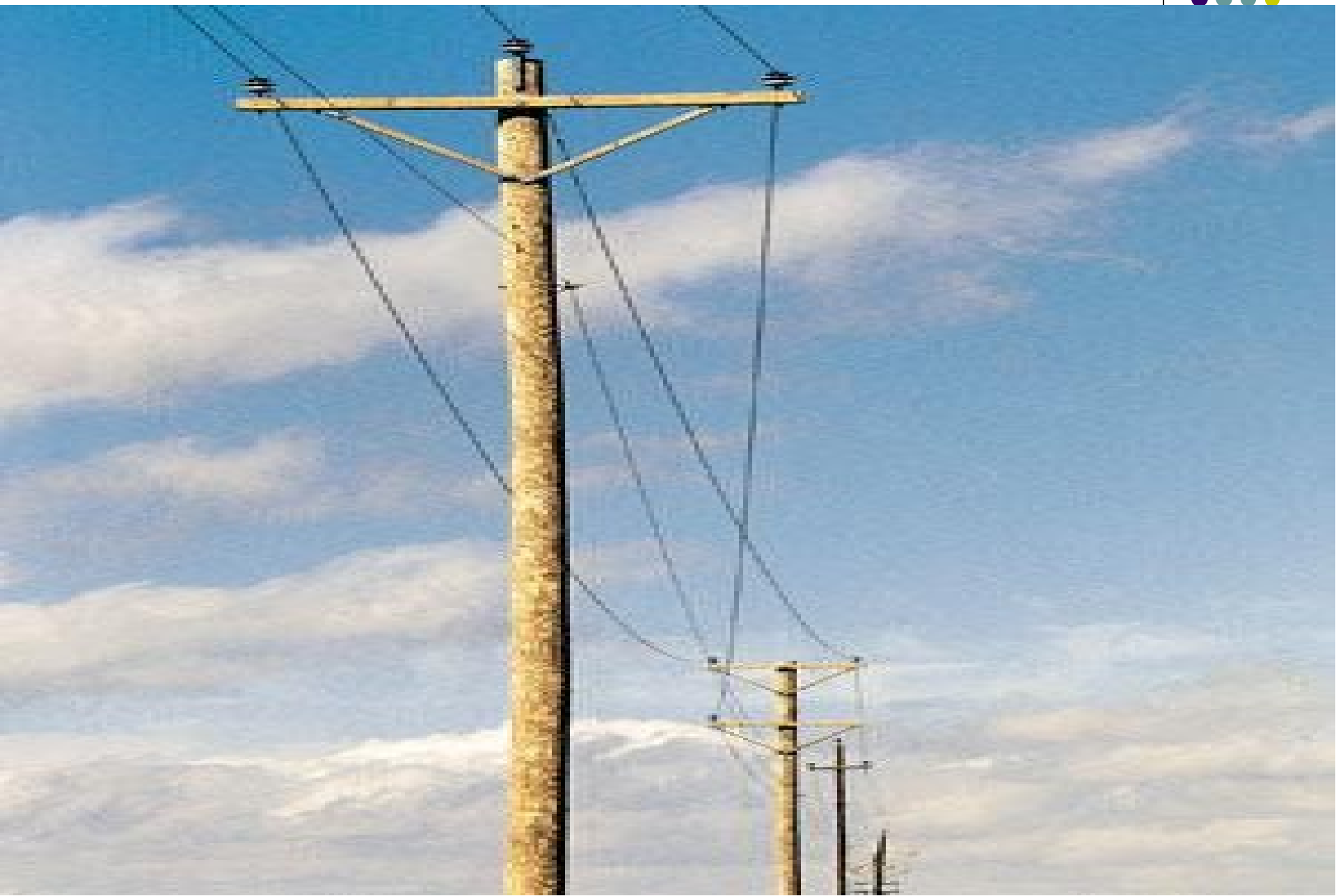
- **Vee-guards**
  - Provided under the bare overhead line running across the public streets to make the line safe if it should break

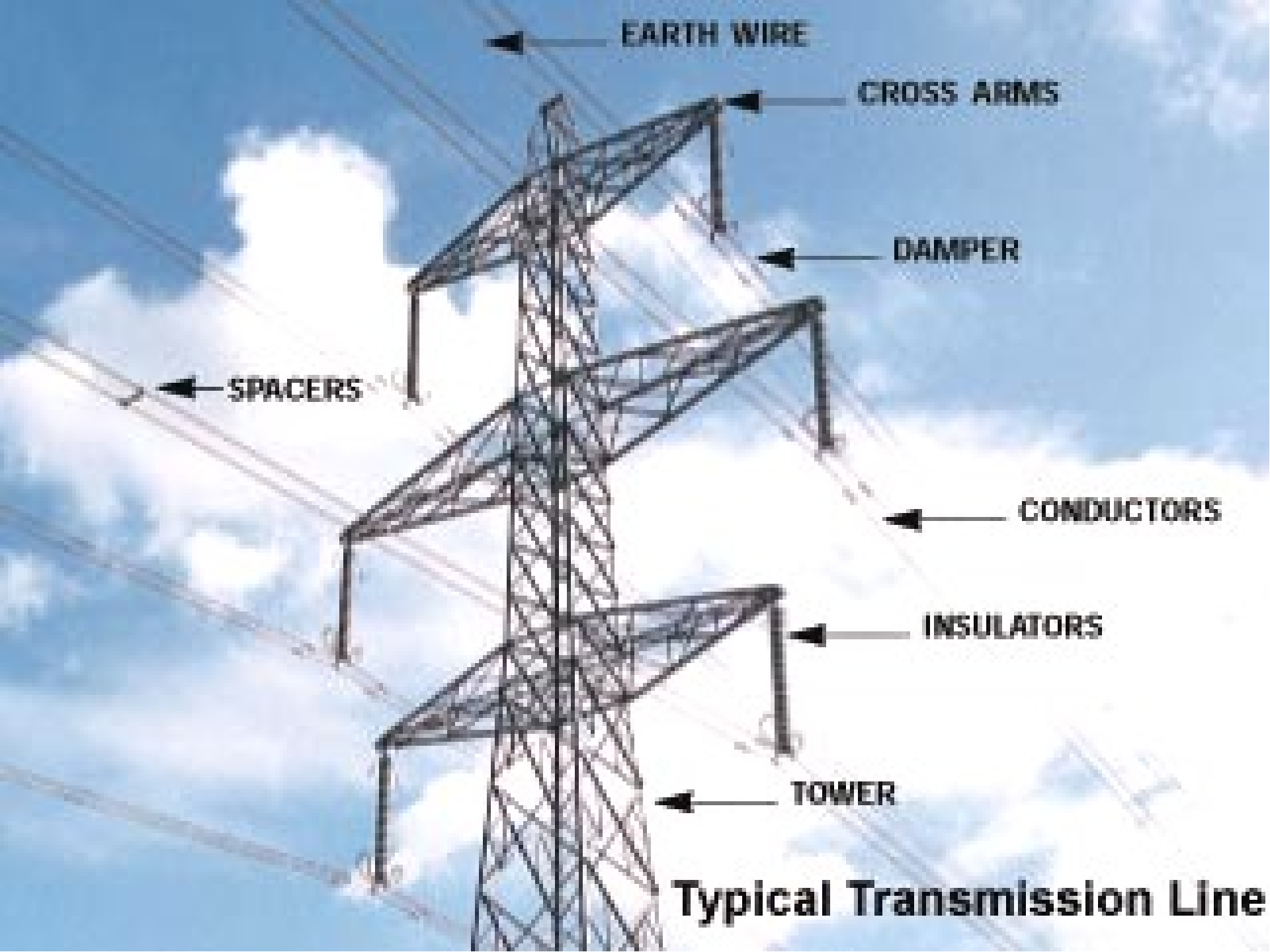
- **Guard wires**
  - Provided above or below the power lines while crossing telegraph and telephone lines

- **Phase plates**
- **Bird guards**
- **Danger plates** – provided at a height 2.5m from the ground as a warning measure

- **Barbed wires –** to prevent climbing by unauthorized persons
- **Mischallaneous** items-vibration dampers, beads for jumpers etc…

Wooden pole





Typical Transmission Line

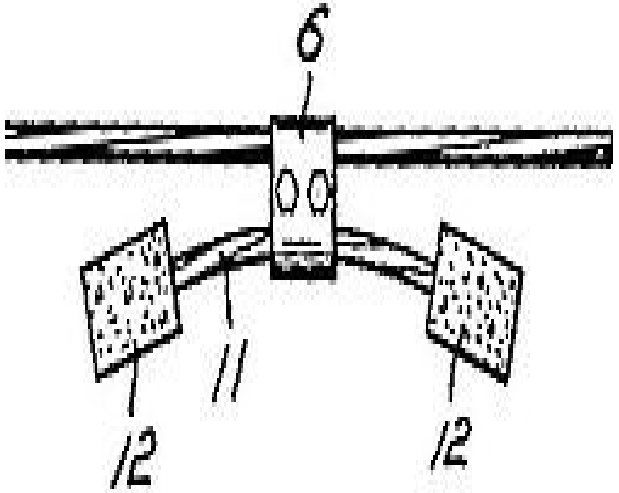
Concrete pole

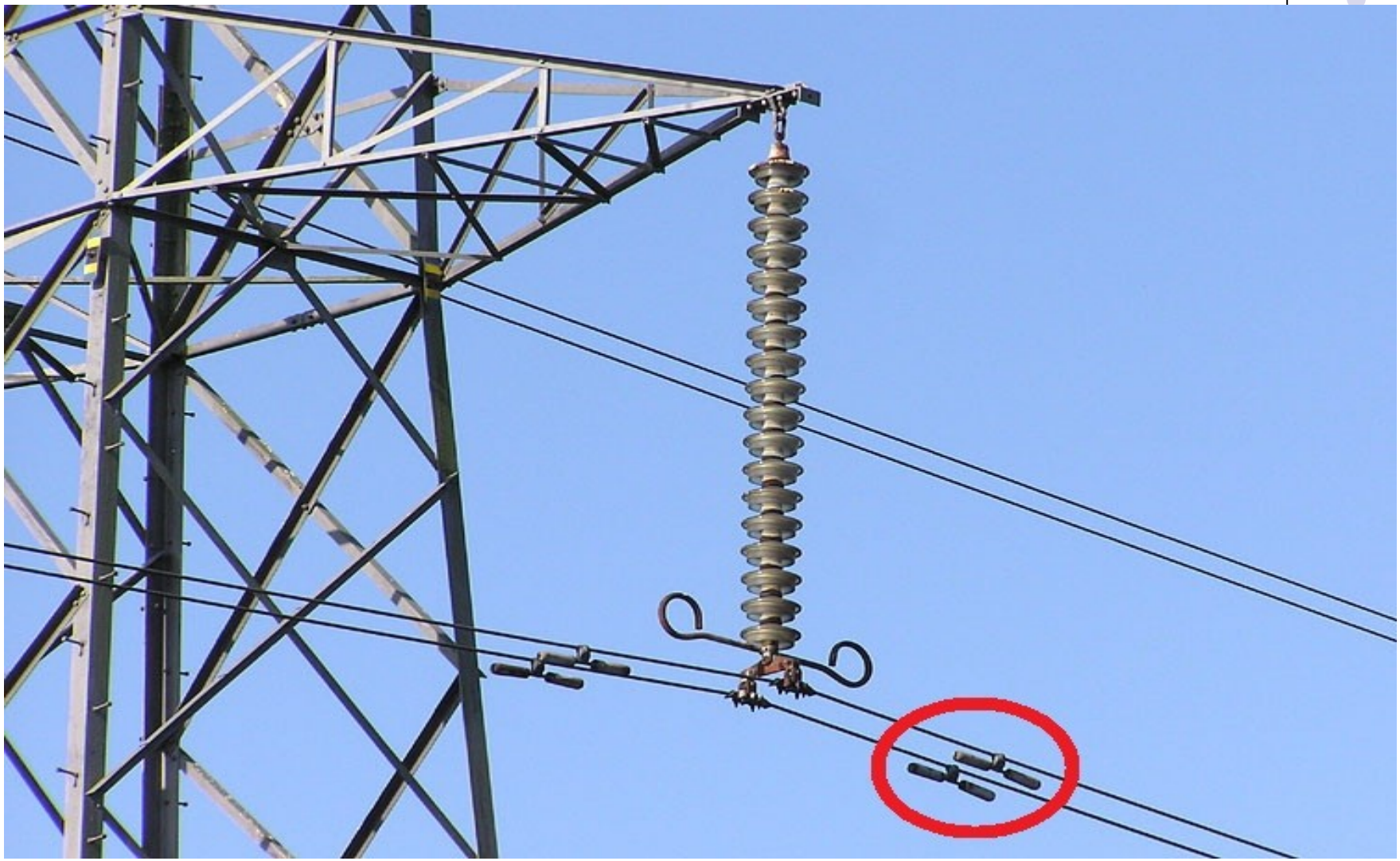
Steel pole &tower

Single circuit steel tower

Double circuit steel tower

Vibration damper





Clearance from ground

- for low, medium & high voltage lines (up to 11kV) =13ft /15ft
- for high voltage lines =17ft

Clearance from buildings

- for low & medium voltage lines =8ft vertical distance &4ft horizontal distance
- For high voltage &EHT lines = 12ft(upto &including 33kV), 6ft horizontal distance

Maximum interval between the supports

- for low & medium voltage lines the distance does not exceed 220ft(67.05m)

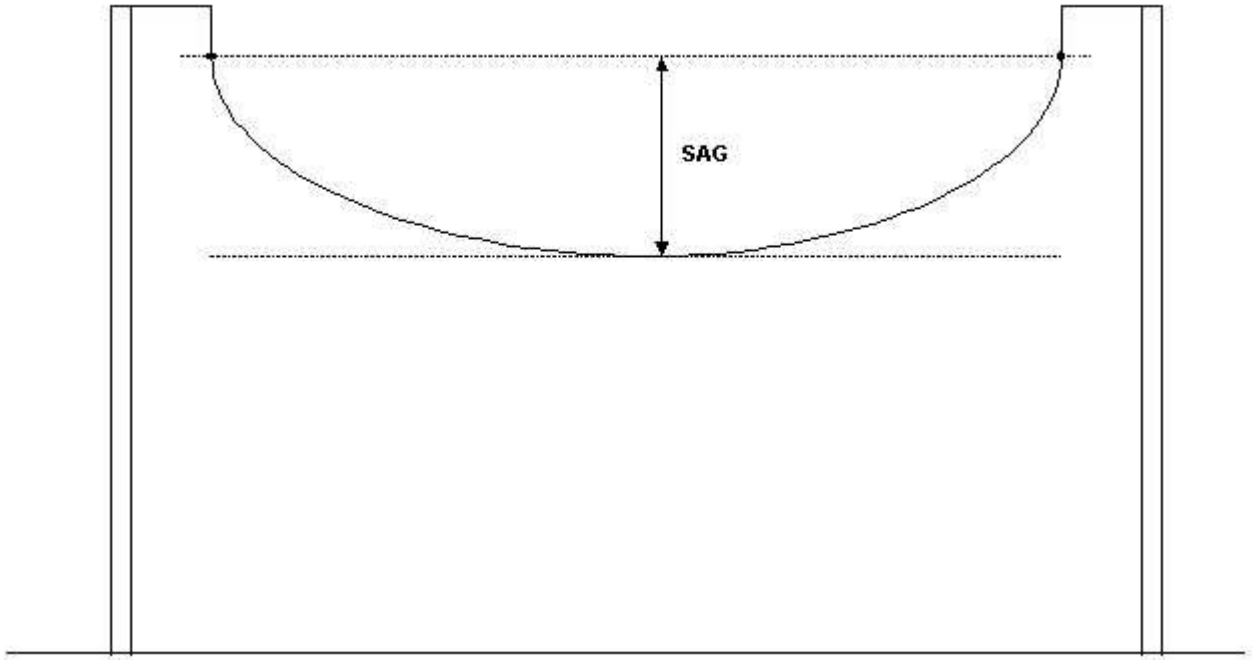
Sag and Tension

-The difference in level between points of supports and lowest point on the conductor is called sag.

- Conductor is acted by the forces such as weight of the conductor,wind pressure and tension etc…
- The tension ion the conductor is expected to be less than 50% of its ultimate tensile strength.
- When the conductor is suspended between 2 supports at the same level it takes the shape of a catenary.
- If the sag is very small compared with the span ,sag-span curve will be a parabola.

- Tension on the conductor acts tangentially.Tension To at the lowest point O act horizontally.This horizontal component is constant throughout the length of the wire.
- Tension at the supports is approximately is equal to the horizontal tension acting at any point on the wire.
- Tension in the conductor depends on diameter of the conductor, length of the conductor between the supports, material,sag,wind pressure & temperature.

SAG



Factors affecting sag

- Weight of the conductor- heavier the conductor greater the sag
- Length of the span – sag is proportional to square of span length
- Working tensile strength

  $$= \frac{\text{ultimate stress} \times \text{area of cross section}}{\text{factor of safety}}$$

  sag is inversely proportional to Working tensile strength of the conductor
- Temperature – sag increases with rise in temperature

Calculation of sag

- A sag is so adjusted that tension in the conductor is within the safe limits
- The tension is due to conductor weight, effects of wind, ice loading and temperature variations
- Keeping the tension less than 50% of its ultimate tensile strength ie minimum factor of safety in the conductor tension is **2**

Cases

- 1)When supports are at equal levels

_If l=length of the span,

w =weight per unit length of the conductor,

T = tension in the conductor

$$T \times y = wx \times x/2$$

- $\longrightarrow \quad y = \frac{wx^2}{2T}$

This is the maximum value of sag at either the supports A or B

$$x = l/2, y = S$$

$$S = \frac{w(l/2)2}{2T} = \frac{wl^2}{8T}$$

- If l =span length

  h = difference in levels between 2 supports

  x1 =distance of support at lower level from O

  x2 = distance of support at higher level from O

  T = tension in the conductor

  w = weight per unit length of the conductor

$$y = \frac{wx1^2}{2T}$$

At A $x = x1, y = S1$ $\Longrightarrow$ $S1 = \frac{wx1^2}{2T}$

& $S2 = \frac{wx2^2}{2T}$

KMEA ENGINEERING COLLEGE

APPROVED BY AICTE | AFFLIATED TO KTU | EDATHALA P.O

DEPT OF
ELECTRONICS AND INSTRUMENTATION
IN ASSOCIATION WITH
TEP CELL

"A VIRTUAL WORKSHOP ON PLC & LABVIEW"

JOSEPH ROJER V Y

INDUSTRIAL AUTOMATION PROFESSIONAL & TRAINER/FACULTY

2 PM | 11 JUNE 2021

STAFF CO ORDINATOR
RASHIDA HAMEED
9446735924

STUDENT CO ORDINATOR
MUHAMMED AMIR K A
8547131266

C.H. MOHAMMED KOYA KMEA ENGINEERING COLLEGE
ESTD - 1957 APPROVED BY AICTE AFFILIATED TO KTU

INTERNAL QUALITY ASSURANCE CELL

SEMINAR, SYMPOSIUM, FDP, WORKSHOP AND OTHER TECHNICAL ACTIVITIES

Name of the Department	ELECTRONICS AND INSTRUMENTATION ENGINEERING
Name of the Head of the Department	SHAILA C K

Type of Activity:

Workshop

Title of Activity :

"A virtual workshop on PLC & LabView"

Add rows as required

Objective :

Getting to know the essentials of **PLC** technology can enrich you with the knowledge to automate tasks performed within the house. For instance, a **PLC** framework can be utilized to keep away the overflow of water from the overhead tank. These form just a couple of reasons explaining the **importance** of **PLC** and its **training**.

Add rows as required

Level of activity (College/Regional / National / International) and target audience

College Level, Students

Add rows as required

Project Impact -Expected outcome - academic / social / commercial

- Instrumentation is measurement and control.
- So the scope is high.
- PLCs allow educators opportunities to directly improve teaching and learning. ...
- PLCs build stronger relationships between team members. ...
- PLCs help teachers stay on top of new research and emerging technology tools for the classroom.

Add rows as required

Programme details

Date	Time	Activity	Venue	Infrastructural requirements and availability
11/6/2021	2pm – 3pm	webinar	Google Meet	NA

Add rows as required

Resource Person Details :

Name	Designation	Organization	Area of Expertise
Mr.Joseph Rojer V Y	Industrial Automation professional and trainer/faculty.	Eurotech	Electronics & Instrumentation

Add rows as required

Profile of collaborating/participating Industry/s or professional body or other orginisation/s, if any.

Name	Address	Website	Contact person , designation, email	Roles in collaborating/participating	Financial commitment[#] in Rs.
				Total Rs.	

[$]Mention role of Industry/orgnisation.
Add rows as required..
[#]Attach copy of letters received from participating industry showing intent / financial commitment etc.

Budget Estimates

Head of expenditure	Anticipated expenditure	Budget by parent orgnisation	External Sponsorships	Assistance requested from Council (R)
Remuneration to speakers	2000			
Stationery, printing,	na			
Travel, Stay and DA	na			
Other(please write each heading in each row	na			
Total				2000

Add rows as required.
Max assistance 3 Lakhs

Details of Coordinators

	Coordinator 1	Coordinator 2
Name	Rashida Hameed	Manjusha T S
Exact designation	Assistant Prof	Assistant Prof
Department	Electronics & Instrumentation Engineering	Electronics & Instrumentation Engineering
Cell number	9446735924	8848544204
Email	rhd.ei@kmeacollege.ac.in	mts.ei@kmeacollege.ac.in
Signature		

Report of the Event: (Minimum 500 Words)

The workshop on "A virtual workshop on PLC & LabView" was conducted at 2.00pm on 11/6/21 by the Electronics & Instrumentation Engineering Department in association with TEP Cell. The session was handled by Mr.Joseph Rojer V Y, Industrial Automation professional and trainer/faculty. The event was coordinated by Ms. Rashida Hameed(Assistant Professor) of Electronics & Instrumentation Engineering Department. Ms Sumayya of S4 EIE welcomed the session. All faculty members, S4,S6&S8students of EIE Dept and some students from EEE Dept (total of 50 participants)actively participated in the seminar.

***NB: Attach the following documents:**

1. **Registration Form - Sample**
2. **List of participants(attendance sheet with Signature)**
3. **2 Event photo (Covering Resource Person& Screen, Audience) with Date**
4. **Poster/ Brochure**
5. **Certificate - Sample**
6. **Feedback Form - Sample**
7. **Collected feedback (Should keep it in Department and produce whenever instructed)**
8. **2 Mins Video (Should keep it in Department and produce whenever instructed)**

HOD **PRINCIPAL**

KMEA ENGINEERING COLLEGE

Approved by AICTE | Affiliated to KTU | Edathala P.O

Department of Electronics and Instrumentation Engineering

In Association with TEP cell

AUTOMATION OVERVIEW

RESOURCE PERSON

17 JUNE 2021

7PM

GOOGLE MEET

MR.BASIL BABY

Plc Engineer

Axios Automation

(Alumni 2007 Pass out)

Staff Co-ordinator

Jasna K Azeez

Student Co-ordinator

Vishnu Mohanan M

NAAC · 5 Star MoE GOVT OF INDIA · ATAL RANKING 64 MoE, Govt. of India · MURDOCH UNIVERSITY · UNIVERSITI TEKNOLOGI MARA · N·S·D·C National Skill Development Corporation · SKILL DELIVERY PLATFORM KERALA

C.H. MOHAMMED KOYA KMEA ENGINEERING COLLEGE
ESTD - 1957 APPROVED BY AICTE AFFILIATED TO KTU

INTERNAL QUALITY ASSURANCE CELL

SEMINAR, SYMPOSIUM, FDP, WORKSHOP AND OTHER TECHNICAL ACTIVITIES

Name of the Department	ELECTRONICS AND INSTRUMENTATION ENGINEERING
Name of the Head of the Department	SHAILA C K

Type of Activity:

Webinar

Title of Activity :

"Automation an Overview"

Add rows as required

Objective :

Automation is key a concept for the 4.0 industry and is a growing value among industrial companies. The interest of organizations in technologies that facilitate automation such as **IoT, Artificial Intelligence (AI) or Blockchain** is due to the benefits they bring. It represents outstanding advantages in many respects, but above all in terms of time and cost savings.To take advantage of these benefits, companies today need to carry out industrial automation processes through **industrial automation systems.**

Add rows as required

Level of activity (College/Regional / National / International) and target audience

College Level, Students

Add rows as required

Project Impact -Expected outcome - academic / social / commercial

- Instrumentation is measurement and control.
- So the scope his high.
- Instrumentation engineers find work in Process industries (Refineries, Fertilizers, Paper, Power plant, Food processing, chemical etc),
- Process Automation (Emerson), Factory Automation (Hyundai).
- **Industrial automation** is the use of data-driven control systems, whether computers, process controllers or robots, to operate **industrial** processes or machinery in a way that reduces the need for human action.

Add rows as required

Programme details

Date	Time	Activity	Venue	Infrastructural requirements and availability
17/6/2021	7pm – 9pm	webinar	Google Meet	NA

Add rows as required

Resource Person Details :

Name	Designation	Organization	Area of Expertise
Mr.Basil Baby	PLC Engineer	Axios Automation	Electronics & Instrumentation

Add rows as required

Profile of collaborating/participating Industry/s or professional body or other orginisation/s, if any.

Name	Address	Website	Contact person , designation, email	Roles in collaborating/participating	Financial commitment[#] in Rs.
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Other(please write each heading in each row	na			
Total				

Add rows as required.
Max assistance 3 Lakhs

Details of Coordinators

	Coordinator 1	Coordinator 2
Name	Jasna k Azeez	Rashida Hameed
Exact designation	Assistant Prof	Assistant Prof
Department	Electronics & Instrumentation Engineering	Electronics & Instrumentation Engineering
Cell number	8547441534	9446735924
Email	jka.ei@kmeacollege.ac.in	rhd.ei@kmeacollege.ac.in
Signature		

Report of the Event: (Minimum 500 Words)

The webinar on "Automation an Overview" was conducted at 7.00pm on 17/6/21 by the Electronics & Instrumentation Engineering Department in association with TEP Cell. The session was handled Mr.Basil Baby,PLC Engineer at Axios Auomation. The event was coordinated by Ms.Jasna K Azeez(Assistant Professor) of Electronics&Instrumentation Engineering Department. Ms Sumayya of S4 EIE welcomed the session. All faculty members, S4,S6&S8students of EIE Dept and some alumni from EIE Dept (total of 50 participants)actively participated in the seminar.

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HOD **PRINCIPAL**

ROBO RACE

- LINE FOLLOWER RACE
- ACCELERO-BOT RACE

WIN PRIZES!!

₹7000

Teams & Rules

- Total number of teams allowed is 10
- First 10 teams registered online will be selected.
- Registration fees will be collected offline on the event date.
- Each team can have a maximum of 3 participants. Team members can be from different institutes.
- Accommodation and food will not be provided due to the pandemic situation.
- Please carry a valid college ID for each member and IEEE membership proof (if any)
- COVID protocol will be strictly followed in the campus.
- Participation certificates will be given to all participants.
- One dose COVID-19 Vaccination certificate or RT-PCR test report within 48hrs is mandatory for the event.

Robot Specifications

- The maximum dimension of the robot can be 20 x 20 cm x 15cm (l x b x h).
- The bot may be wireless/wired but its motion must be controlled by the wrist movements of the player (for Accelero-Bot Race).
- The length of the wire (for wired bots) should be long enough to cover the whole track and the wire should remain slack during the complete run (for Accelero-Bot Race).
- Max weight should be limited by 2kg.
- The machine must not contain any readymade kits, pneumatic & hydraulic systems or IC engines.
- The decision about your robot will be taken by the organizers.
- Readymade toys and cars are not allowed.

Participation Guidelines

- **Participation for students only with valid college ID cards.**
- **Participation fee for IEEE members is ₹50 and for non IEEE members is ₹100 per person.**
- **Round 1:- Qualifier (Minimum number of human intervention and time based).**

Final round: – Track will be revealed on spot (completion and time based).

Game Rules

Line Follower Race:

- **The competition is based on a time trial system. There will be an elimination round for each team.**
- **The top team from the Qualifier round makes it to the final round on basis of time trials and based on a minimum number of human contact with the robot.**
- **In the qualifier, hand touches are allowed with a penalty of 5 seconds. For each hand touch, penalty time will be added further to the overall time required by the robot for the completion of the specified round.**
- **If any of the robots start off before the start-up call, the counter will restart and the machines will get a second chance. If repeated again then the team will be disqualified.**
- **If the robot goes off course of the track, a penalty of 3 seconds will be added each time to the overall time attained by the robot for round completion.**
- **All about the final round will be notified on the final day.**

Accelero-Bot Race:

- **The teams are required to complete the track in the minimum possible time.**
- **The vehicle should only move through the path specified. If the bot violates the path external control(tugging on the wire, touching the bot etc.) is prohibited. Course corrections must be made in 10 seconds or less.**
- **If the robot encounters a problem at any point during the race, the participants will be given 2 minutes to go up to the robot and fix it.**
- **In case of ties, a re-match will be held.**
- **The contestants should be ready with the circuit diagrams, algorithms and code (if any) to give proper answers to any questions by the judges.**
- **The event managers have the right to change any or all of the above rules as they deem fit.**

Contact for more info:

Asst Prof Vasudev S Mallan
8891823880

Prof Shaila C K
9495840616

Ms Kashish Shah
7736890133

Mr Mubaris C M
9526975617

C.H. MOHAMMED KOYA
KMEA ENGINEERING COLLEGE
ESTD - 1957 APPROVED BY AICTE AFFILIATED TO KTU

INTERNAL QUALITY ASSURANCE CELL

SEMINAR, SYMPOSIUM, FDP, WORKSHOP AND OTHER TECHNICAL ACTIVITIES

Name of the Department	IEEE and e-Yantra Robotics Lab
Name of the Head of the Department	Prof. Shaila C K and Dr Sangeetha C P

Type of Activity: A micro-robotics tech-fest

Title of Activity: "Intercollegiate Robotics Event: Robo Race "

Objective:

The event is set to inspire the thought "Learn while they compete and compete while they learn."

Level of activity (College/Regional / National / International) and target audience

Intercollegiate Level, Students

Expected outcome - academic / social / commercial

- Understand microcontroller and its programming
- Develop their own mini robots for racing

Programme details

Date	Time	Activity	Venue	Infrastructural requirements and availability
30/09/2021 – 1/10/2021	10 am – 4 pm	Robotics Race	e-Yantra Robotics Lab	self-prepared infrastructure

Resource Person Details :

Name	Designation	Organization	Area of Expertise
-	-	-	-

Profile of collaborating/participating Industry/s or professional body or other orginisation/s, if any.

Name	Address	Website	Contact person, designation, email	Roles in collaborating/participating	Financial commitment[#] in Rs.
KMEA IEEE				Sponsored	12000 Rs.
				Total Rs.	12000 Rs.

[$]Mention role of Industry/organisation.

[#]Attach a copy of letters received from participating industries showing intent / financial commitment etc.

Budget Estimates

Head of expenditure	Anticipated expenditure	Budget by the parent organization	External Sponsorships	Assistance requested from Council (R)
Remuneration to speakers				
Stationery, printing,	4500			
Travel, Stay and DA				
Cash Prize	7000			
Total	11500			11500

Max assistance 3 Lakhs

Details of Coordinators

	Coordinator 1	Coordinator 2
Name	Mr Vasudev S Mallan	Dr Sangeetha C P
Exact designation	Assistant Professor	Associate Professor
Department	Electronics and Communication Department	Electronics and Communication Department
Cell number	8891823880	9003920949
Email	vsm.ec@kmeacollege.ac.in	scp.ec@kmeacollege.ac.in
Signature		

Report of the Event: (Minimum 500 words)

The event is organised by **IEEE Student Branch KMEA in association with e-Yantra Robotics Lab** and is scheduled on 30th Sep 2021 and 1st Oct 2021 from 10 am to 4 pm at KMEA Engineering College. On 30th Sep 2021 the event started with the inaugural ceremony at 10 am Venue: Conference Hall. The chief guest Mr Sunil Paul, CEO, Srishti Robotics Technologies Pvt. Ltd. inaugurated the event. About 10 teams from different colleges like Sree Budha College of Engineering, Toc H Institute of Science and Technology, Christ College of Engineering registered for the 2-day event. The first event is the Line Follower Race conducted at Systems Lab (EI) Ground floor Green Block. The second event is the Accelero-Bot Race that was conducted at the e-Yantra Lab on 1st Oct 2021. The Judges for the event are Dr A Raju, B&S Department and Asst. Prof. Sandeep K V, ME Department. The event concluded with a valedictory function on 1st Oct 2021 at 3 pm. The winners were awarded certificates and cash prizes worth Rs. 7000/-.

2 Day Python Workshops

Rohit T P
CTO, Trebuchet

Sunith VS
COO, Trebuchet

meet our Mentors

TinkerHub KMEA

IEDC KMEA

EDC KMEA

PYTHON WORKSHOP

KMEA ENGINEERING COLLEGE

Kuzhivelipady, Edathala.P.O., Kochi-683561

2 DAYS PYTHON WORKSHOP
(IEDC KMEA,TINKERHUB KMEA & EDC KMEA)

VENUE: LINUX Lab, Green block
TIME: 9 AM – 4 PM
DATE: 30/06/2022 & 01/07/22

REPORT

IEDC ,TINKERHUB & EDC of KMEA engineering college, organized a 2 day offline workshop on 'Python'. The resource persons for the workshop were Rohit T P , CTO Trebuchet and Sunith V S, COO, Trebuchet.

We had two days of sessions. The session was very interesting and very informative too. Our first day was spent learning the basics of Python. Student coordinators also provided game sessions. During the second day we learned how to create programs using Python, along with games, as well as breaks in between the sessions. We had around 40 participants. We had given participation certificates to all the participants. .Participants were really happy to be a part of this event and many shared their views and experiences as well.

C.H. MOHAMMED KOYA
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INTERNAL QUALITY ASSURANCE CELL

SEMINAR, SYMPOSIUM, FDP, WORKSHOP AND OTHER TECHNICAL ACTIVITIES

Name of the Department	IEDC KMEA
Name of the Head of the Department	Dr. Faseela C K

Type of Activity:

Workshop

Title of Activity :

Two days 3D Printing workshop

Objective :

Level of activity (College/Regional / National / International) and target audience

College Level

Add rows as required

Expected outcome - academic / social / commercial

- To provide basic knowledge about 3d printing
- To design various models using Tinkercad software.
- To inculcate innovation and design thinking.

Add rows as required

Programme details

Date	Time	Activity	Venue	Infrastructural requirements and availability
19/04/2022 & 20/04/2022	9 AM - 4.30 PM	Two days 3D Printing workshop	CAD Lab, PSTA	System with internet

Resource Person Details :

Name	Designation	Organization	Area of Expertise
Abdul Hafis	CEO	IEDC KMEA.	innovation, IoT, 3d Printing

Add rows as required

Profile of collaborating/participating Industry/s or professional body or other orginisation/s, if any.

Name	Address	Website	Contact person , designation, email	Roles in collaborating/participating	Financial commitment# in Rs.

Budget Estimates		1000

Head of expenditure	Anticipated expenditure	Budget by parent organization	External Sponsorships	Assistance requested from Council (R)
Remuneration to speakers	1000			
Stationery, printing,				
Travel, Stay and DA				
Other(please write each heading in each row				
Total	1000			

Details of Coordinators

	Coordinator 1	Coordinator 2
Name	Dr. Faseela C K	Rajeesh R Pillai
Exact designation	Associate Professor	Assistant Professor
Department	Electrical & Electronics Engineering	Mechanical Engineering
Cell number	9747270203	
Email	fsl.ee@kmeacollege.ac.in	rrp.me@kmeacollege.ac.in
Signature		

Report of the Event: (Minimum 500 Words)

IEDC of KMEA engineering college , organized a 2 day offline workshop on '3D Printing'. IEDC KMEA always tries to brush up the young minds of innovators and entrepreneurs.We organized such an occasion. A 2 days 3D printing workshop conducted on 19th &20th May 2022. The session was handled by Abdul Hafis,CEO of IEDC KMEA.

The event was a great accomplishment. A Model is printed using a 3D printing machine. 48 designs were assembled by the dynamic participants.We concluded the event by rewarding the best designs certificate by the Chief guest of the event,Dr Amar Nishad,Director of KMEA Engineering College and Dr.Rekha Lakshmanan,Vice Principal of KMEA Engineering College


IEDC KMEA
INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRE
eyantra
KMEA Engineering College
KMEA
Two Days
3D PRINTING
WORKSHOP
MAY-19&20
2022
CAD Lab PSTA Block
Register Now: t.ly/niHC
Fee:100₹
Lead by
ABDUL HAFIZ
CEO IEDC KMEA
Enquiry:
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iedc.kmeacollege.ac.in
Gpay:7592990568


GPS Map
Camera Lite
393H+HV7, Mochamkulam, Kuzhivelippady, Kerala 682021, India
Latitude
10.05392101°
Longitude
76.37999982°
Local 03:42:14 PM
GMT 10:12:14 AM
Altitude -33.24 meters
Thursday, 19-05-2022


SAFETY INSTRUCTIONS
GPS Map
Camera Lite
393H+HV7, Mochamkulam, Kuzhivelippady, Kerala 682021, India
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Longitude
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GMT 10:12:11 AM
Altitude -30.15 meters
Thursday, 19-05-2022


SAFETY INSTRUCTIONS
KMEA


SAFETY INSTRUCTIONS

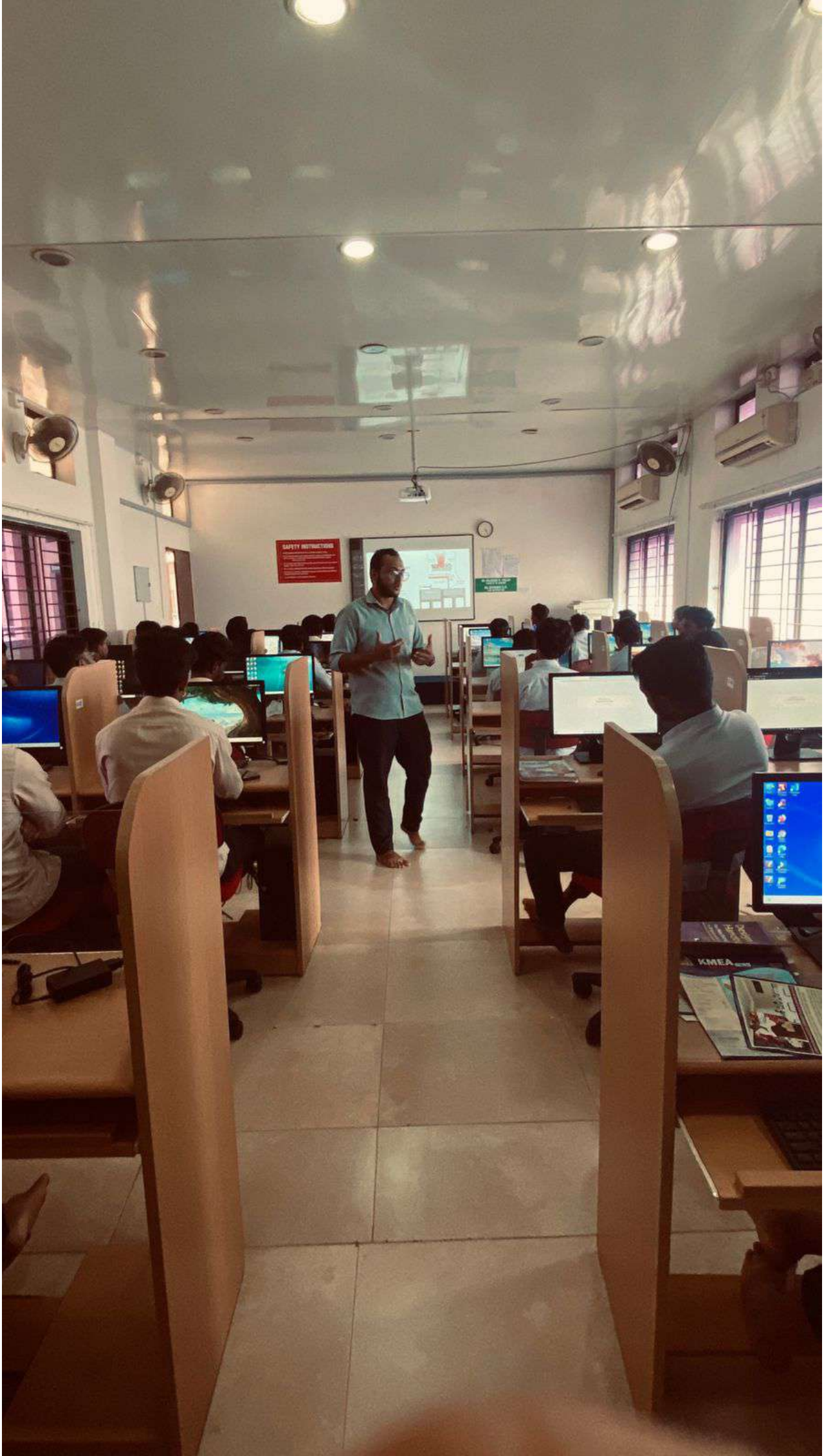

Mr. RAJEESH R. PILLAI
FACULTY IN CHARGE
Mr. DEVADAS K. R.
LAB INSTRUCTOR
C-16


SAFETY INSTRUCTIONS
C-22

***NB: Attached the following documents:**

1. **Registration Form -**
2. **Poster-attached**
3. **Screen shots of the event covering resource person and participants-**
4. **Certificate - NIL**
5. **Feedback Form-NIL**

HOD **PRINCIPAL**


SAFETY INSTRUCTIONS
KMEA


GPS Map
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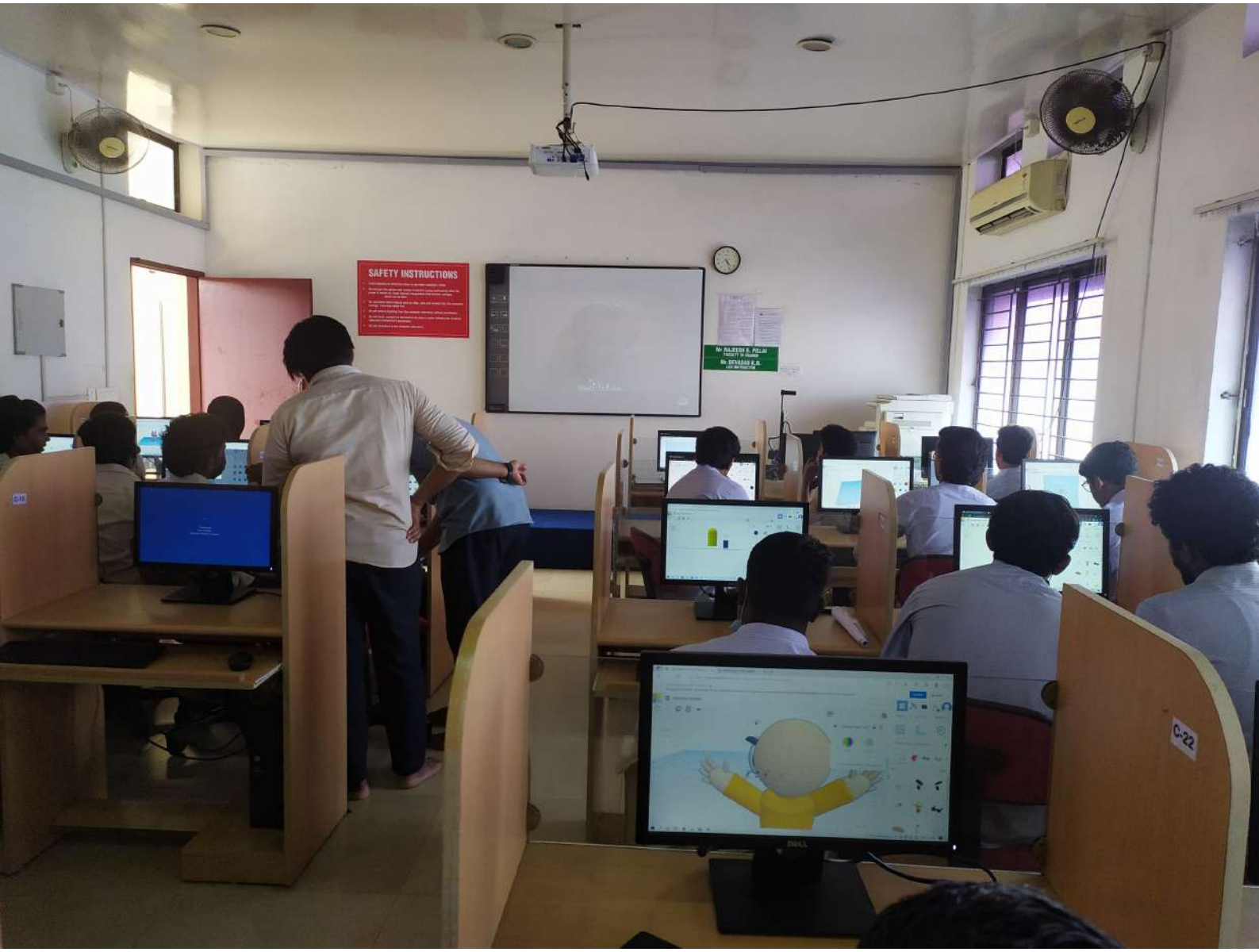
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IEDC KMEA

INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRE

KERALA STARTUP MISSION

Two Days

3D Printing Workshop

Apply Now: t.ly/niHC

May-19&20
2022

E-Yantra Lab

NB:Exclusively for firstyear of KMEA Engineering College

Reg Fee:100₹

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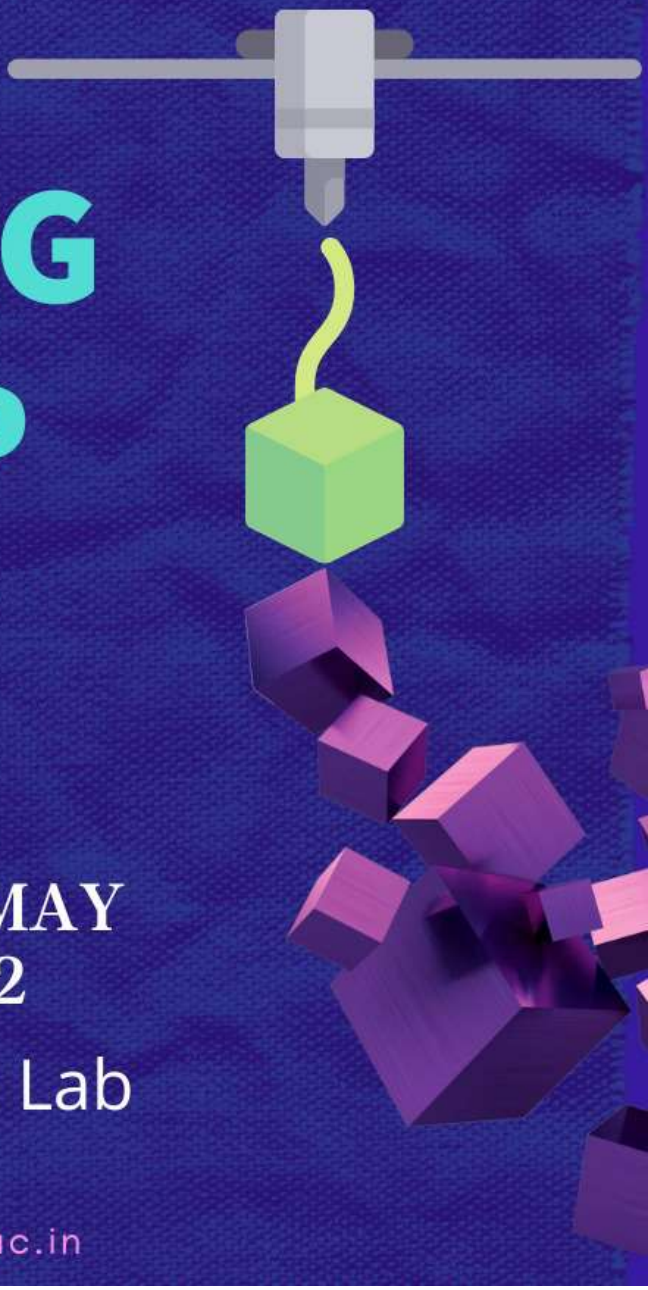
eyantra
KMEA ENGINEERING COLLEGE

KMEA

TWO DAYS

3D PRINTING WORKSHOP



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REG FEE:100₹

19&20 MAY 2022

E-Yantra Lab

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KMEA ENGINEERING COLLEGE

Kuzhivelipady, Edathala.P.O., Kochi-683561

KSUM FIELD VISIT (IEDC KMEA)

VENUE: Kerala startup mission , Kalamassery

TIME: 9 AM – 12 PM

DATE: 28/05/22

Kerala Innovation Week is India's largest Design, Technology and Maker fest held at Kerala Technology Innovation Zone, Kochi. They have a great startup ecosystem which helps to encourage the startup culture in Kerala.IEDC KMEA had visited Kerala startup mission, Kalamassery as part of Innovation week on 26th May 2022. We had around 20 participants and also faculty members. It was helpful to meet many faculties and students from different colleges and also met many innovators and learned about many new technologies. We had seen many innovative ideas, including eco-friendly products, equipment and software. It was really motivating and inspiring.


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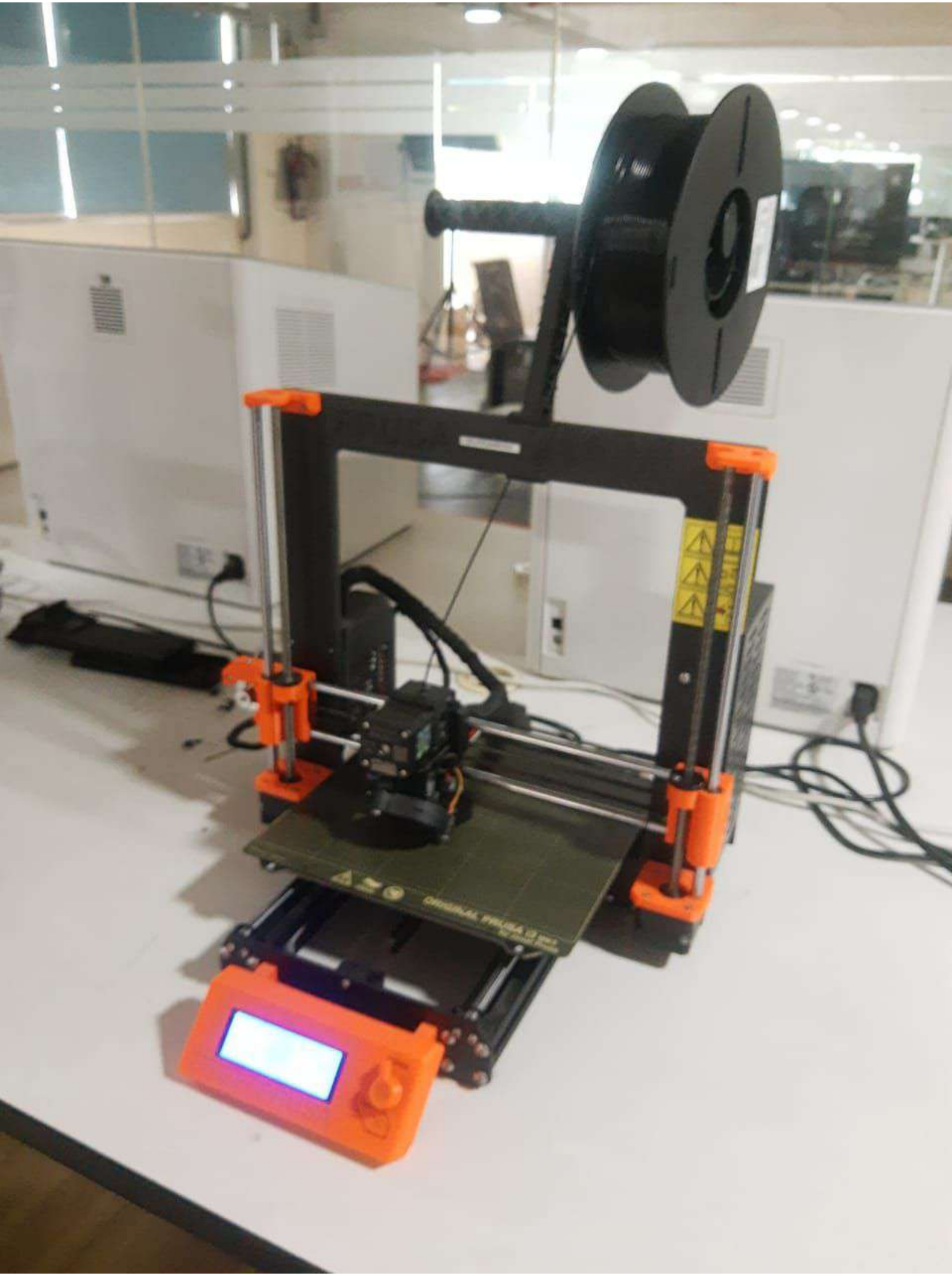


Report on
IEEE (SPS)
PCB DESIGNING AND FABRICATION
WORKSHOP

INTRODUCTION

The Workshop was jointely collaborated between IEEE KMEA SPS (Singal Processing Society) and IEEE KMEA on June 22,23,24 in KMEA Engineering College. The three day workshop was led by Arun M.J (Managing Director of Makonics Infinity Solution Pvt.Ltd). The workshop was based on PCB Designing and Fabrication .

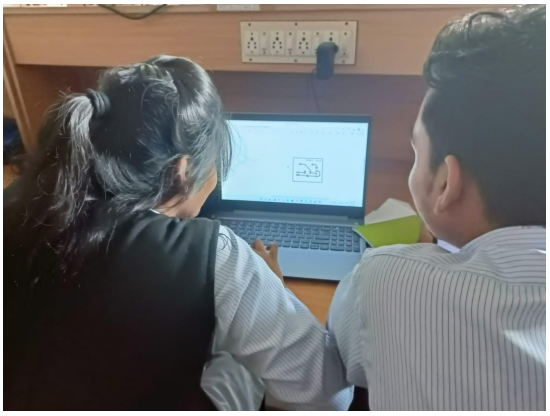
Day 1(22/06/22)

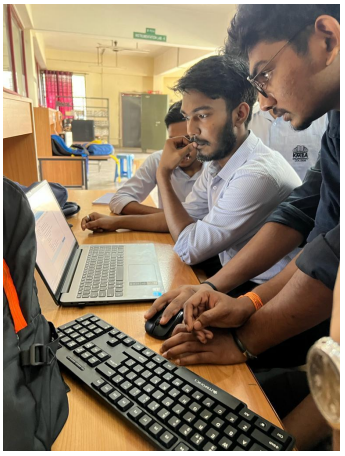
The Workshop (Day 1) was conducted in mini conference room in PSTA block . In Day one 26 students were splitted into 9 teams. Team name were Coulomb, Electron, Electrify, Infinity, Farad, Newton, IQ Tech, Tesla, Electra. They gave a brief introduction on circuits, components, component problems etc. To declare the winner workshop assignment were given to each team. First day was completely a theory section.



Day 2(23/06/22)

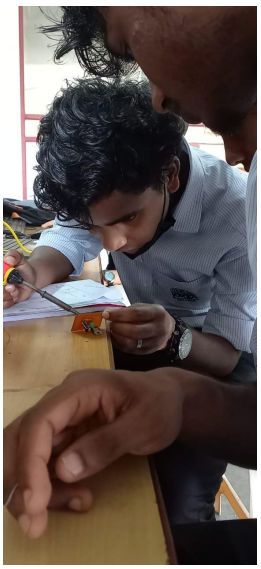
Day 2 workshop was conducted in e-yantra lab in Green block. Day 2 was about circuit designing. We designed the circuit using software called Orcad . Simple diagram of the circuit was designed in Capture and the main diagram was designed in the Layout plus in Orcad software. Everyone designed different models of circuit using components such as resistor, capacitors, connector, IC, LED in the software.



Day 3(24/06/22)

Day 3 workshop was conducted in e-yantra lab.In Day 3 we were assigned to design a circuit individually, wining team were given 500pts. We started to fabricate the circuit that was designed in Day2. PCB board and components was given to every team to complete their PCB design. Everyone successfully completed the circuit fabrication in PCB. At the end of workshop Dr Amar Nishad (Principal) was invited for the closing ceremony. The anchoring was done by Nadha Nasrin (Technical Coordinator). The welcome speech was said by Pooja M.P (Chair). The presidential address was delivered by Dr Amar Nishad (Principal). A momento was given to Arun M.J (Managing Director of Makonics Infinity Solution Pvt.Ltd) by Dr Amar Nishad Principal of KMEA engineering college. The winner was announced in the end of the workshop (team- Coulomb) the prize for the winner was given by Dr.Sreeja P (Branch Counsellor)



The meeting report is prepared by Gouri Parvathi TS (Documentation Head)