



# Dr. LANKAPALLI BULLAYYA COLLEGE OF ENGINEERING

The Society For Collegiate Education

Affiliated to Andhra University, Approved by AICTE

# 52-14-75, Resapuvanipalem, Visakhapatnam - 530 013.

Ph : Off : 0891-2703293, 2703296

Email : principal@lbce.edu.in Website : www.lbce.edu.in

## DEPARTMENT OF BASIC SCIENCES AND HUMANITIES Innovative Teaching Methods

PROGRAM	: B.Tech ECE
CLASS AND SEMESTER	: I B.Tech., II-Sem., ECE, Section-B
ACADEMIC YEAR	: 2023-2024
COURSE NAME & CODE	: English
COURSE INSTRUCTOR	: Dr V Radha Devi
DATE	: 02 July 2024
TEACHING METHOD	: Activity Based Teaching
TOPIC	: Communication Skills

### Team Building Activities

Improving students' communication skills can improve productivity and their success at all levels. It also allows them to enhance and showcase their talents. Team-building activities are a fun and educational way for the students to improve team-wide communication, although identifying the right activity can take some time and research. Teambuilding activities have been conducted to the first-year ECE B students to develop rapport and interpersonal skills, the activities are namely,

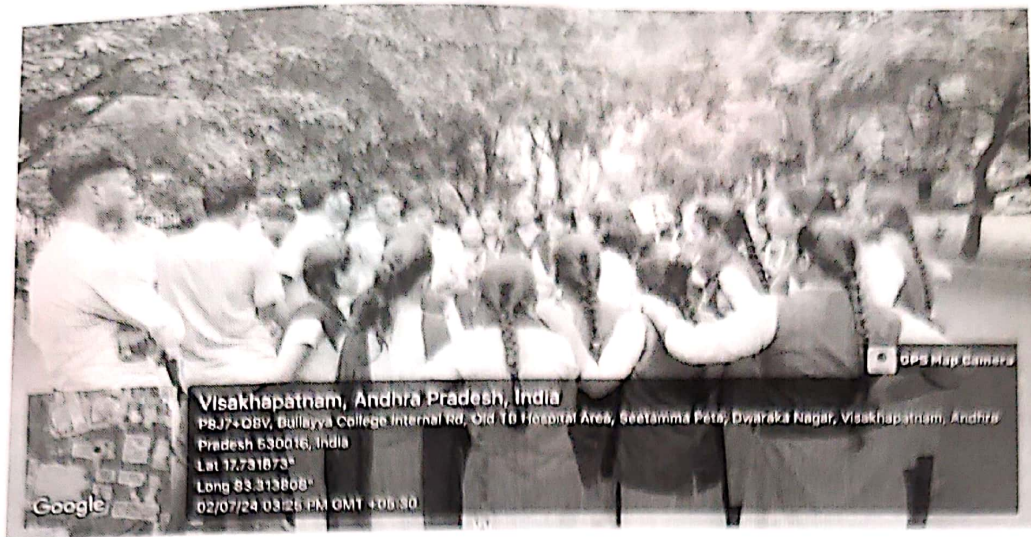
1. Seven Up
2. Wall, Gun, Rabbit
3. Reverse the circle
4. Blind fold

The students actively participated in the activities and they could learn how individuals think, communicate and solve problems. Team-building activities are both educational as well as fun.

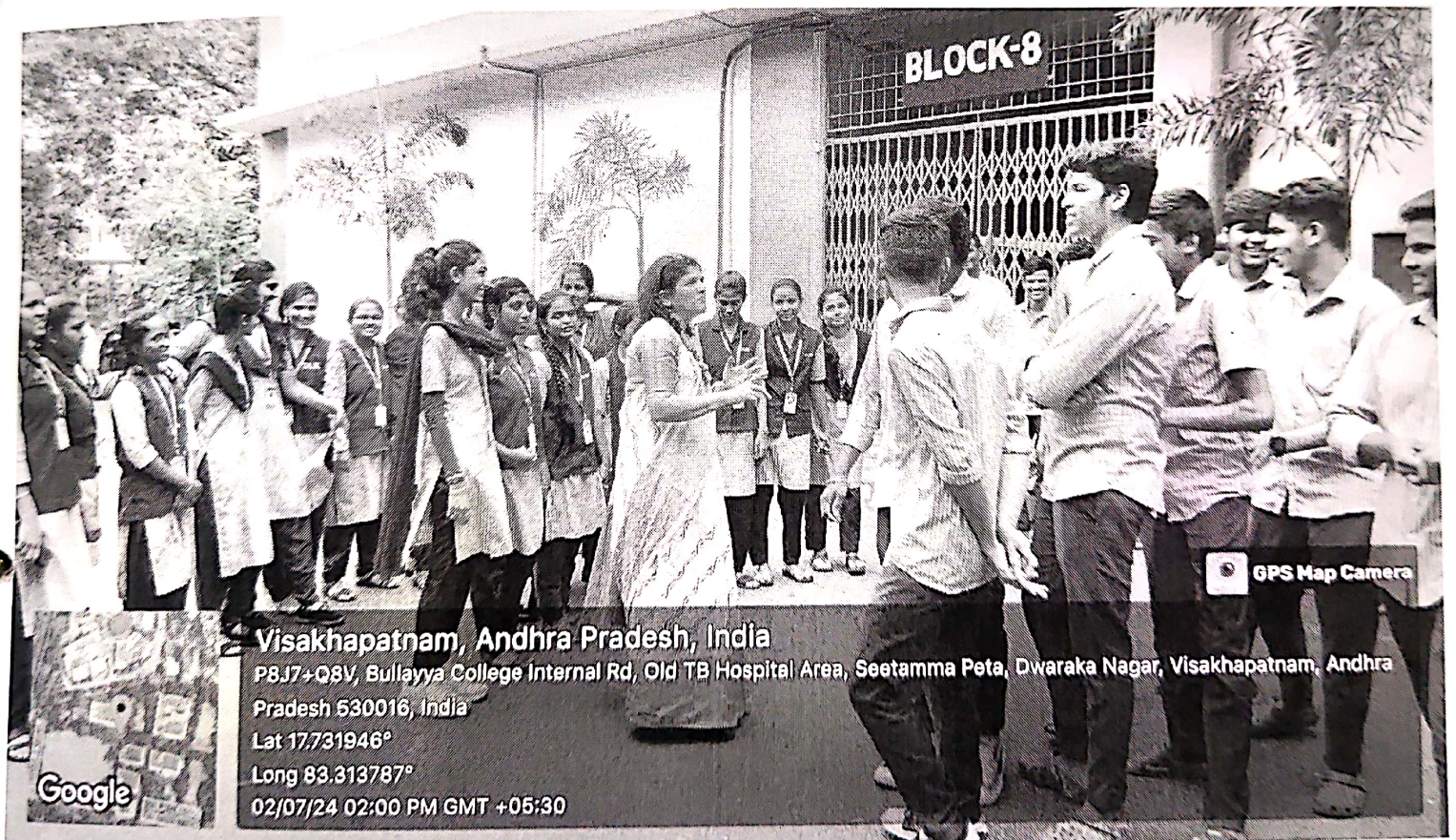
The advantages of these activities are:

1. Enhances team spirit
2. Improves effective communication
3. Develops leadership skills
4. Improves creativity
5. Provides platform to showcase talent
6. Get engaged in work and focus on goals
7. Problem Solving skills
8. Conflict Management



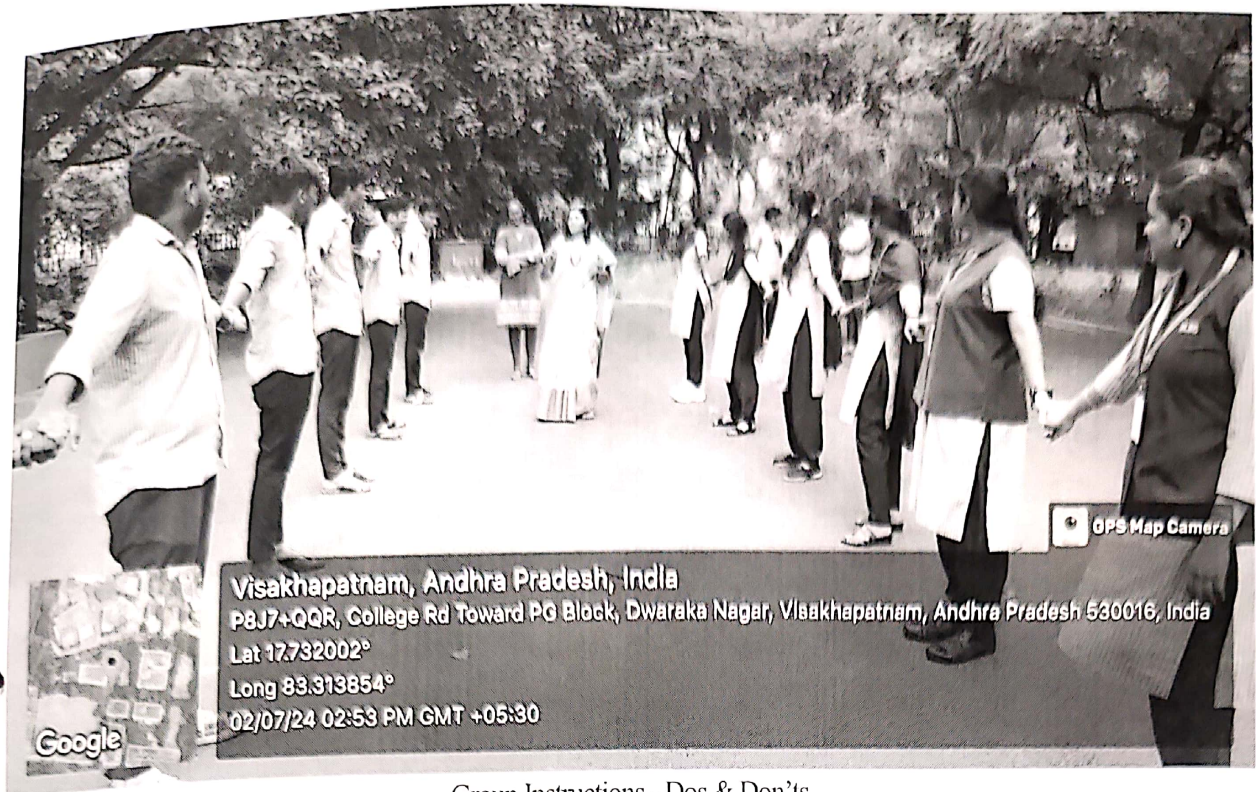


Instructions being given to the students

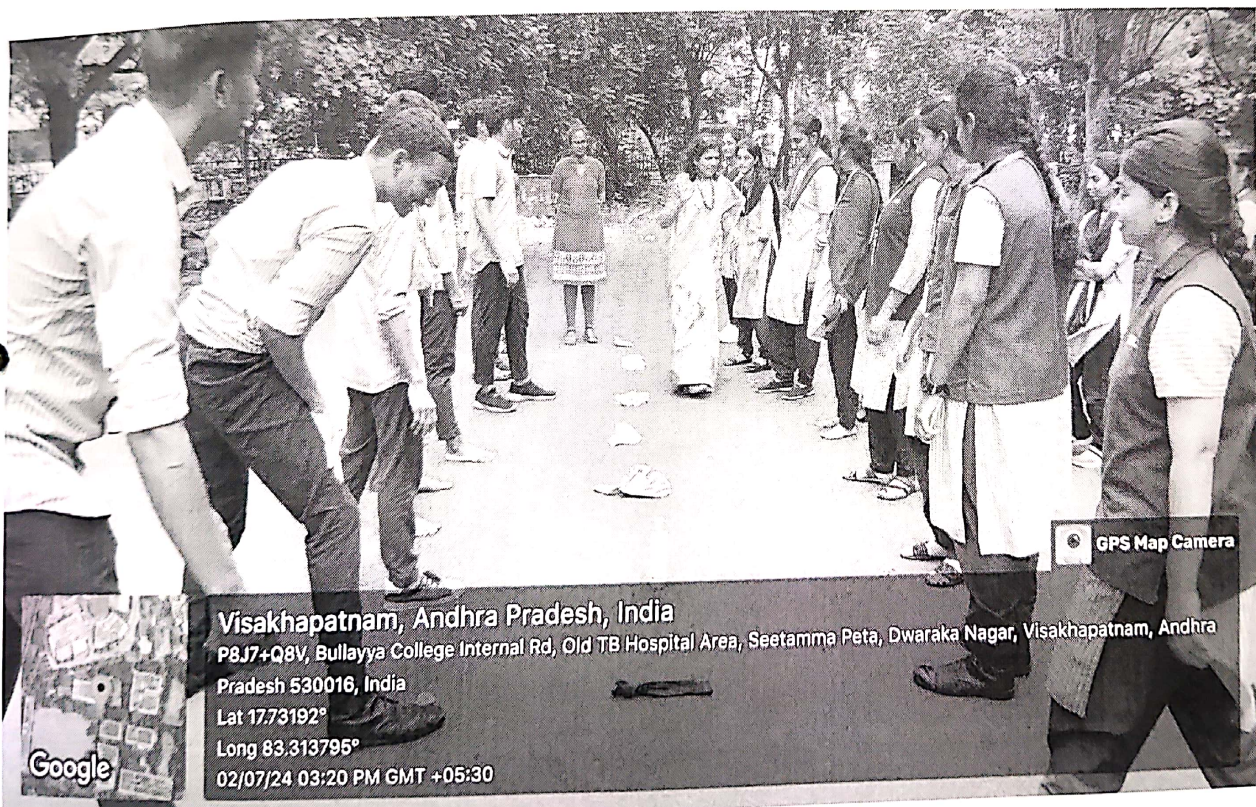


Divisions of groups



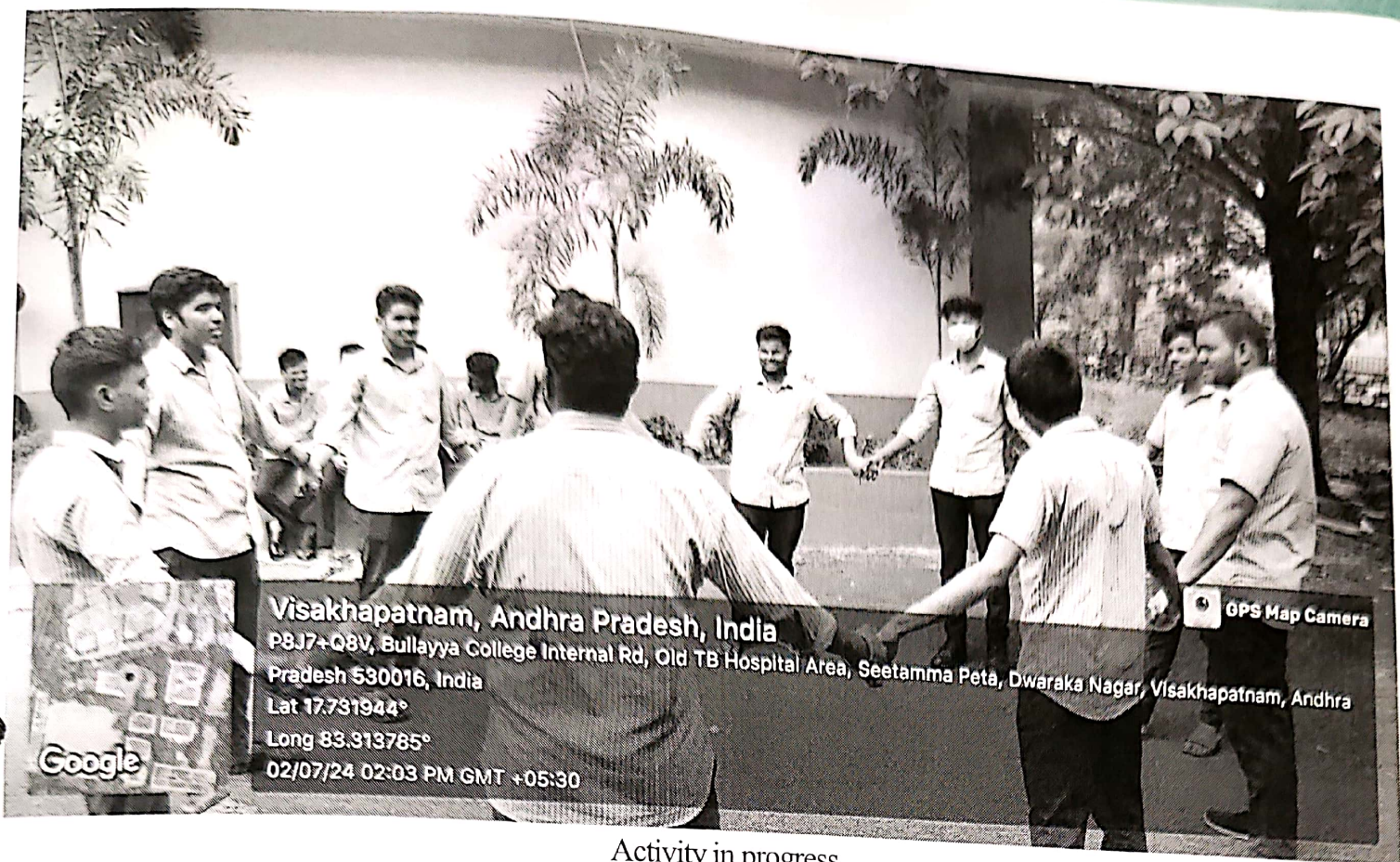


Group Instructions - Dos & Don'ts

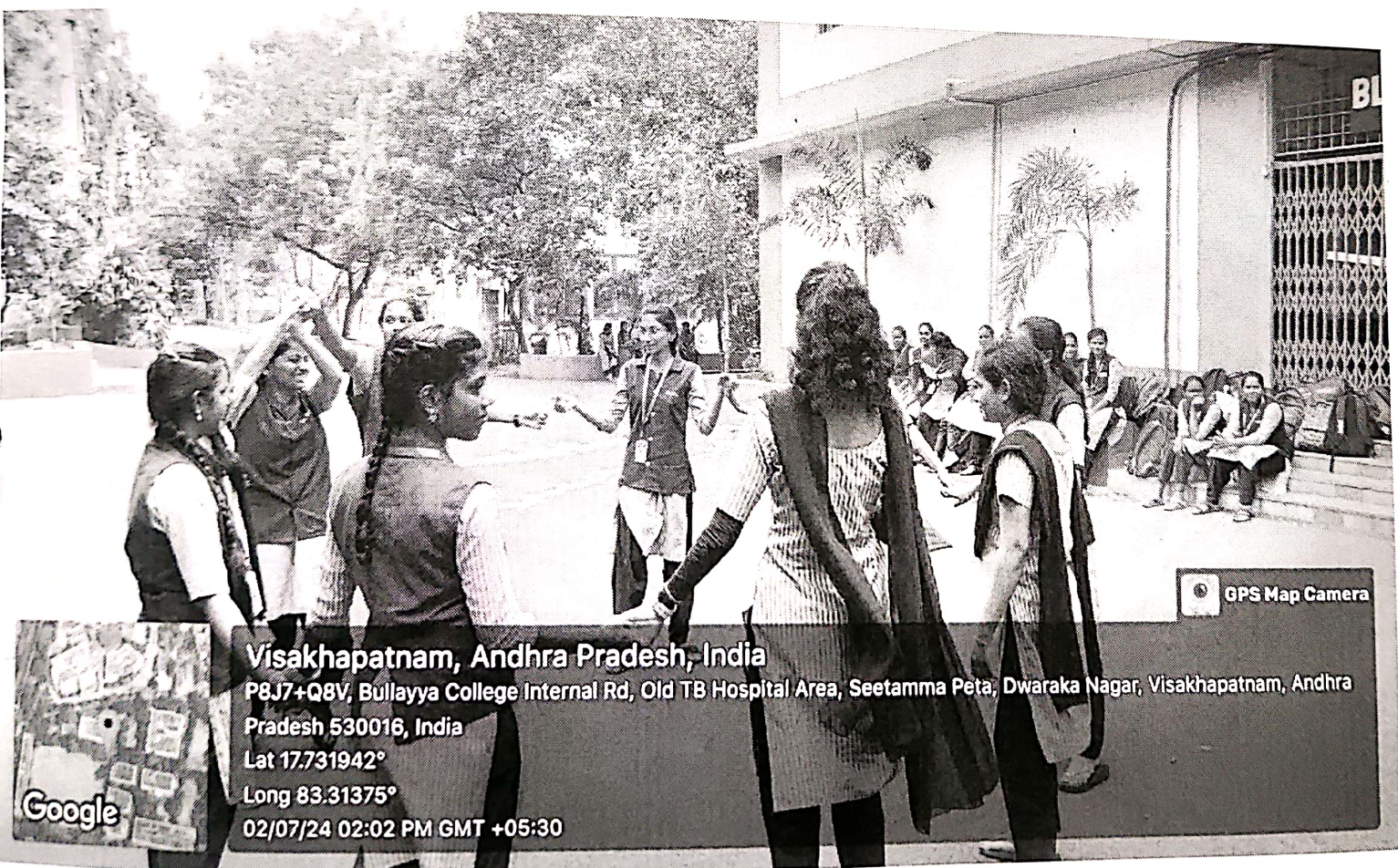


Activity in progress



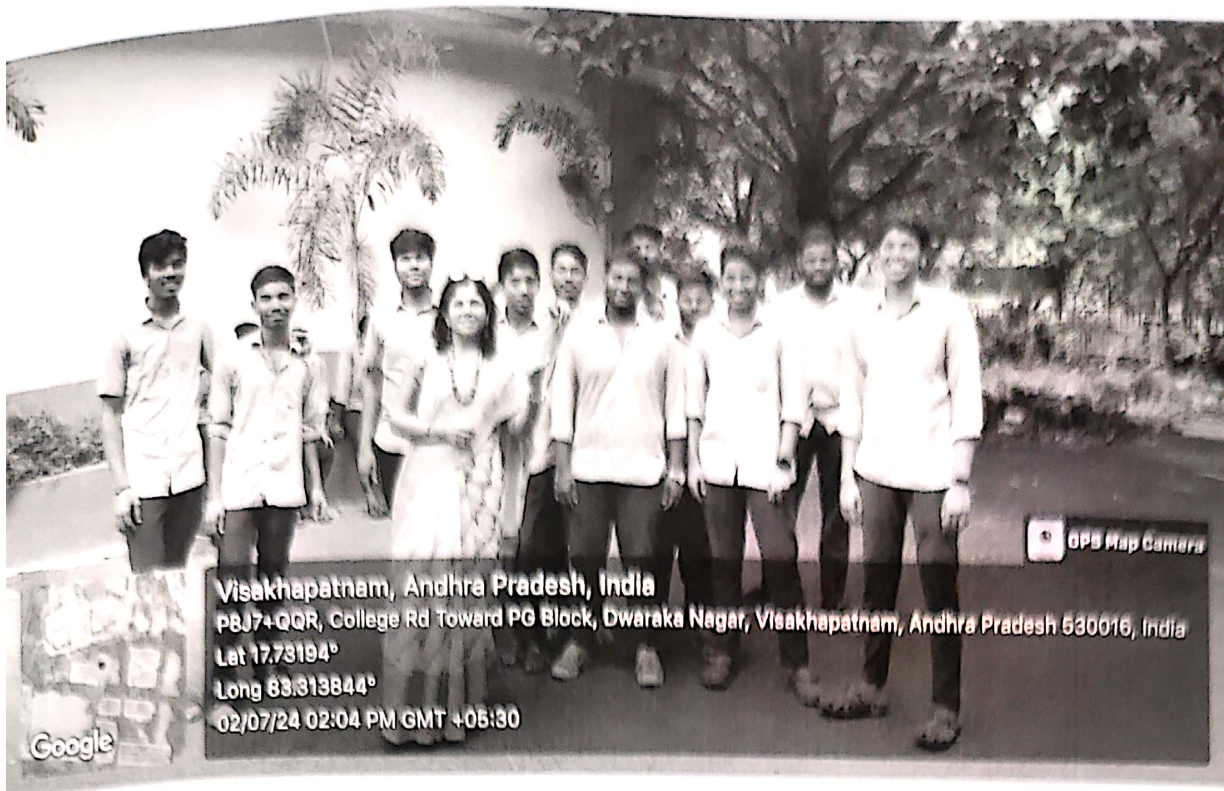


Activity in progress

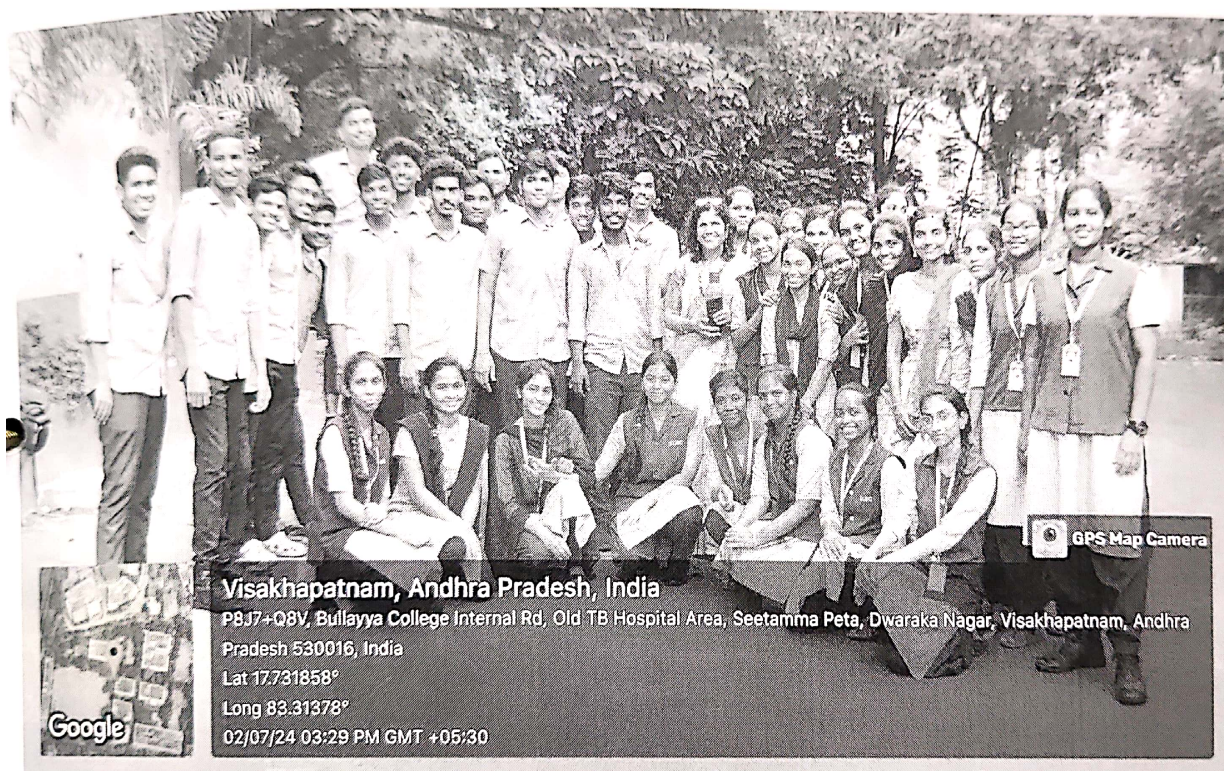


Activity in progress





Winning team in excitement



Class Group Photograph

*V. M. D.*  
 Course Instructor

*V. M. D.*  
 Course Coordinator

*V. M. D.*  
 HOD  
 Head of the Department  
 Dept. of Basic Sciences & Humanities  
 Dr. Lankapalli Bullayya College of Engineering  
 Rajupuvanipalem, Visakhapatnam - 530013





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## DEPARTMENT OF CIVIL ENGINEERING

### Innovative Teaching Methods

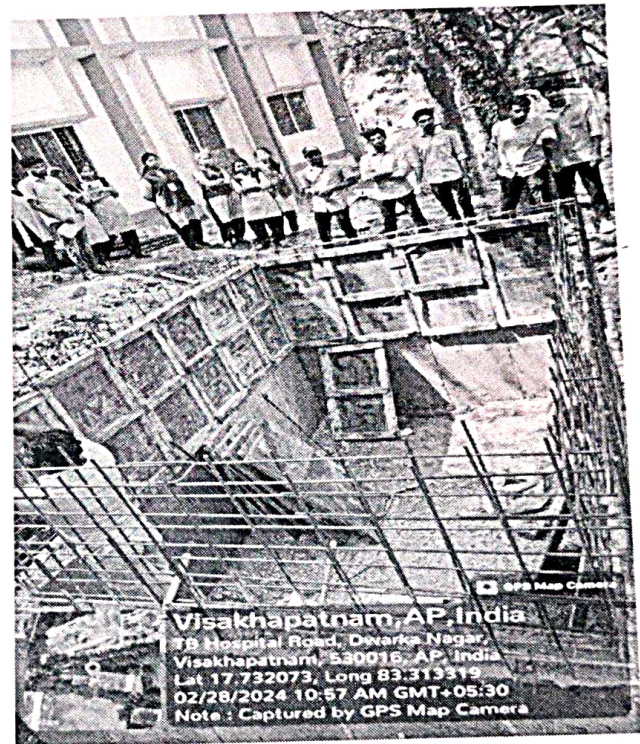
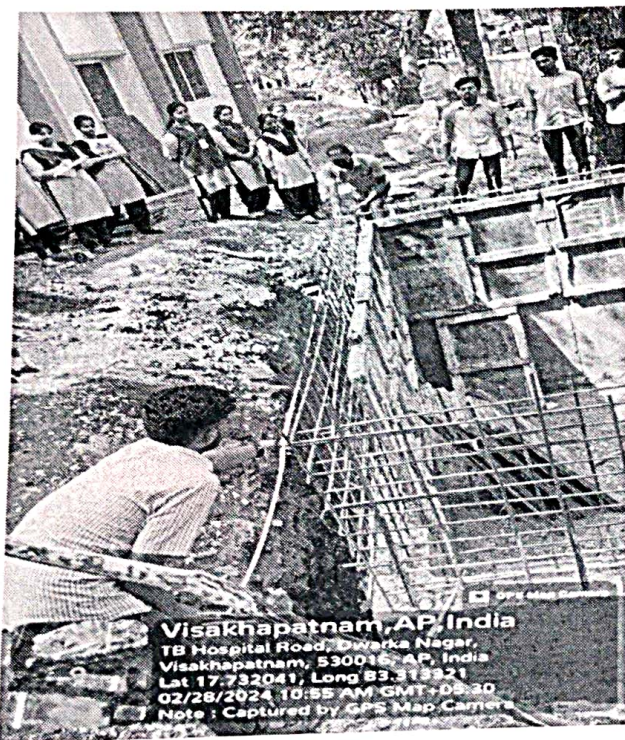
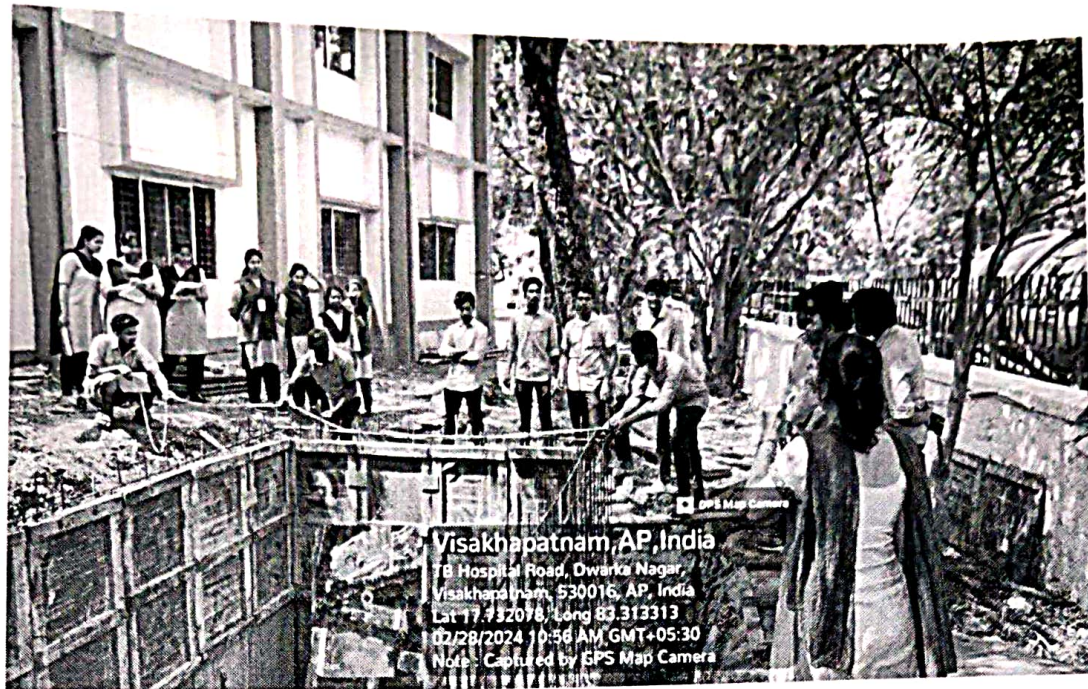
**PROGRAM** : B.Tech CIVIL  
**CLASS** : III B.Tech II-Sem., CIVIL  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : Engineering Economics Estimation and Costing; CV3202  
**COURSE INSTRUCTOR** : Dr. Arunima.M  
**Name of the Method** : Experimental based Learning TLM 6

Topic: Reinforcement Details of the Water Tank

Experiential based learning is done by the 3<sup>rd</sup> year students which includes estimating of reinforcement of steel in water tank constructed in the bullayya campus







Following are the reinforcement details of the water tank surveyed by the students of 3<sup>rd</sup> B.Tech Civil

Length (L) = 4.3 m

Breadth(W) = 2.8 m

Depth (or) height (H) = 2.745 m

Diameter of the rod = 12 mm = 0.012 m

Wall Thickness (T) = 150 mm = 0.15 m

Earthwork in Excavation = 5 m x 4 m



**1) Volume of Water Tank :**

$$\text{Volume} = L \times B \times H$$

$$= 4.3 \times 2.8 \times 2.745$$

$$= 33.04 \text{ m}^3$$

**2) Wall Area :**

$$\text{Wall area} = 2(L+W) \times H \times T$$

$$= 2(4.3+2.8) \times 2.745 \times 0.15$$

$$= 5.846 \text{ m}^3$$

**3) Reinforcement Size and Spacing :**

i) Vertical Bars = 150 no.s


ii) Horizontal Bars = 96 no.s

iii) Bent-up Bars = 48 no.s

iv) Anchor Bars = 44 no.s

v) Spacing = 0.23 m

  
Course Instructor

  
HOD  
Head of the Dept.  
Dept. of Civil Engineering  
Dr. Lankapalli Butayya College of Engineering  
Resourvanipalem, Visakhapatnam-530013, A.P.





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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### Innovative Teaching Methods

**PROGRAM** : B.Tech EEE  
**CLASS AND SEMESTER** : II B.Tech., I-Sem., EEE,  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : Electrical Machines-I, EE2104  
**COURSE INSTRUCTOR** : Mr. Ch.Arun Kumar  
**Name of the Method** : Experiential Learning  
**Date** : 21-10-2023



Mr.Ch.Arun Kumar, Assistant professor, EEE, explaining about characteristics of DC shunt generator

The characteristics of DC generators include no load and load characteristics. The no load characteristics are follow a linear path and gets saturated. The load characteristics are drooping because of armature reaction and armature resistance voltage drop. These characteristics are experimentally determined and explained by the faculty to II/IV EEE students in the electrical machines lab and later the students were asked to repeat the same.

*Ch Arun*  
Course Instructor

*J.A*  
Class coordinator

*[Signature]*  
HOD





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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

	<b>Innovative Teaching Methods</b>
<b>PROGRAM</b>	: B.Tech EEE
<b>CLASS AND SEMESTER</b>	: II B.Tech., II-Sem., EEE,
<b>ACADEMIC YEAR</b>	: 2023-2024
<b>COURSE NAME &amp; CODE</b>	: Electrical Machines-II, EE2203
<b>COURSE INSTRUCTOR</b>	: Mr. Ch.Arun Kumar
<b>Name of the Method</b>	: Experiential Learning
<b>Date</b>	: 15-04-2024



Mr.Ch.Arun Kumar, Assistant professor, EEE, explaining about voltage regulation of an alternator

The voltage regulation of an alternator or synchronous generator is defined as the rise in the terminal voltage when the load is decreased from full-load rated value to zero. The speed and field current of the alternator remain constant. It can be determined experimentally by EMF, MMF and ZPF method. The faculty has explained the methods of EMF and MMF methods and demonstrated the experiments to the students of II/IV EEE.

*Ch. Arun Kumar*  
Course Instructor

*J.A. G.*  
Class Coordinator

*[Signature]*  
HOD





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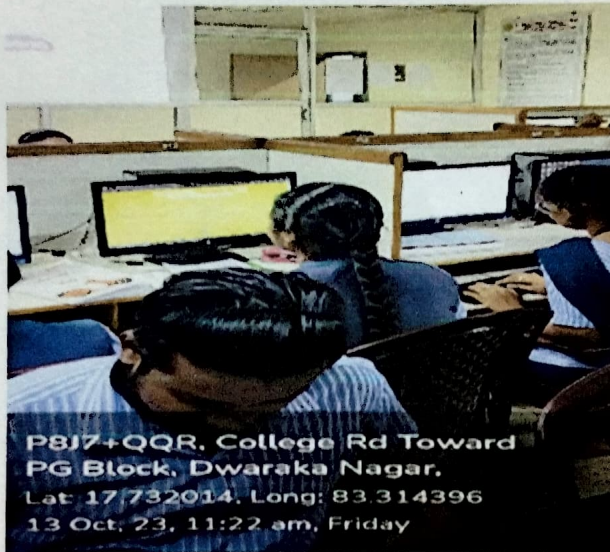
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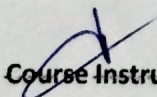
### DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

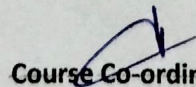
**Program** : B.Tech CSE  
**Class And Semester** : IV B.Tech., I-Sem., CSE-A  
**Academic Year** : 2023-2024  
**Course Name & Code** : Web Technologies, CS4105  
**Course Instructor** : G.Sandhya  
**Teaching Method** : Experiential Learning  
**Date** : 13-10-2023  
**Topic** : Web page creation



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PG Block, Dwaraka Nagar,  
Lat: 17.732014, Long: 83.314396  
13 Oct, 23, 11:22 am, Friday

The Students are learning by experience on how to create dynamic web pages in the presence of instructor. Students gain idea on creating websites and real time applications.

  
Course Instructor

  
Course Co-ordinator

  
HOD





# Dr. Lankapalli Bullayya College of Engineering

New Resapuvani Palem, Visakhapatnam

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## Department Of Electronics And Communication

### Student Centric Methods

Program	: B.Tech ECE
Class and Semester	: II B.Tech., I-Sem., ECE
Academic Year	: 2023-2024
Course Name & Code	: ANALOG COMMUNICATIONS, EC-2103
Course Instructor	: S. SRAVANI, Assistant Professor
Teaching Method	: Experimental based Learning
Date	: 23-11-2023
Topic	: SSB MODULATION AND DEMODULATION

### Experimental based Learning



Single-Sideband (SSB) modulation and demodulation are essential topics in communication systems, especially for efficient use of bandwidth and power. Here's a basic overview of how you might conduct an SSB modulation and demodulation experiment:



## 1. Experiment Overview

**Objective:** To understand and demonstrate the principles of Single-Sideband (SSB) modulation and demodulation.

### Equipment Required:

- Signal generator (for producing the modulating signal)
- Carrier generator (for producing the carrier signal)
- SSB modulator
- SSB demodulator
- Oscilloscope or spectrum analyzer (for observing signals)
- Audio equipment (for input and output signal observation)

## 2. SSB Modulation

### Modulation Process:

#### 1. Signal Preparation:

- Generate a message signal (audio signal) using the signal generator.
- Generate a carrier signal using the carrier generator.

#### 2. Mixing:

- The message signal and carrier signal are combined in the SSB modulator.
- SSB modulation suppresses one of the sidebands and reduces the carrier frequency, conserving bandwidth and power.

#### 3. Filtering:

- The modulated signal is filtered to remove the unwanted sideband (either the upper sideband or lower sideband) and possibly the carrier frequency, depending on whether you're using SSB-SC (Single-Sideband Suppressed Carrier) or SSB-FC (Single-Sideband with Carrier).

### Measurement:

- Use the oscilloscope or spectrum analyzer to observe the modulated signal and verify that only one sideband is present.

## 3. SSB Demodulation

### Demodulation Process:

#### 1. Receive the Modulated Signal:

- The SSB modulated signal is fed into the SSB demodulator.

#### 2. Carrier Restoration:

- In the demodulator, the original carrier frequency (or a reference signal) is restored to recover the original message signal. This step might involve some form of automatic gain control or phase-locked loop to properly synchronize.



### 3. **Extraction:**

- The message signal is extracted from the demodulated output.

### **Measurement:**

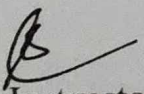
- Observe the recovered message signal on the oscilloscope or listen to it using audio equipment to ensure the signal is correctly demodulated.

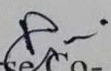
## **4. Analysis and Discussion**

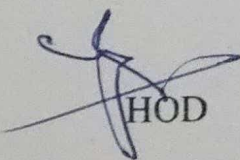
- **Efficiency:** Discuss how SSB modulation reduces bandwidth and power compared to AM (Amplitude Modulation) and why this is advantageous for communication systems.
- **Sidebands:** Analyze the effects of suppressing one of the sidebands and how it impacts the fidelity of the recovered signal.
- **Carrier Frequency:** Examine how different approaches to handling the carrier frequency affect the demodulation process.

## **5. Conclusion**

Summarize the results of the experiment, including how well the SSB modulation and demodulation processes worked and any observations regarding the signal quality and efficiency.

  
Course Instructor

  
Course Co- Ordinator

  
HOD





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### DEPARTMENT OF ELECTRONICS AND COMMUNICATION

#### Student Centric Methods

Program : B.Tech ECE  
Class and Semester : II BTech., I-Sem., ECE  
Academic Year : 2023-2024  
Course Name & Code: SIGNALS AND SYSTEMS -EC 2104  
Course Instructor : Mr. P. SAHITYA KIRAN, Assistant Professor  
Teaching Method : Experimental Learning  
Date : 04/11/23

**TOPIC: Fourier Transform of a given signal and plotting its magnitude and phase spectrum**





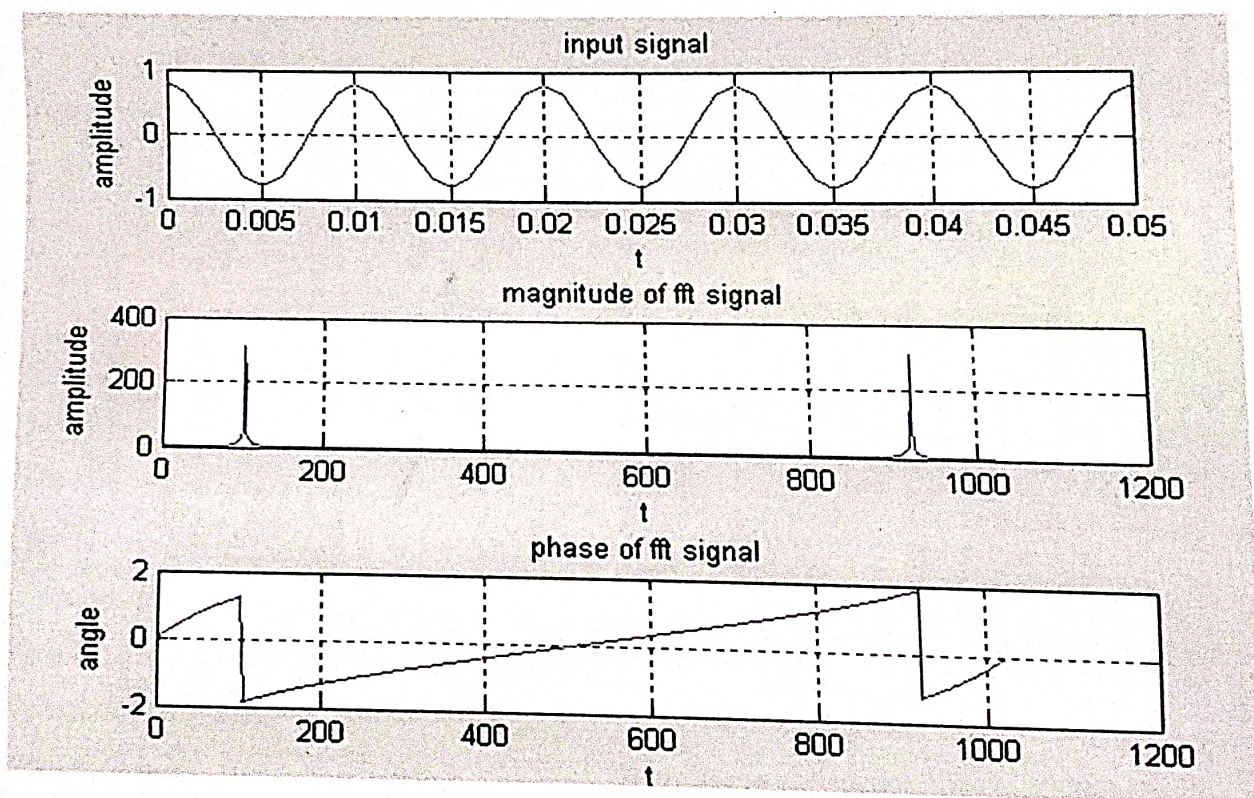
The Fourier transform as follows. Suppose that  $f$  is a function which is zero outside of some interval  $[-L/2, L/2]$ . Then for any  $T \geq L$  we may expand  $f$  in a Fourier series on the interval  $[-T/2, T/2]$ , where the "amount" of the wave  $e^{2\pi i n x/T}$  in the Fourier series of  $f$  is given by

By definition Fourier Transform of signal  $f(t)$  is defined as

$$F(w) = \int_{-\infty}^{\infty} f(t) e^{-j\omega t} dt$$

Inverse Fourier Transform of signal  $F(w)$  is defined as

$$f(t) = \frac{1}{2\pi} \int_{-\infty}^{\infty} F(w) e^{j\omega t} dw$$



*[Signature]*  
Course-Instructor

*[Signature]*  
Course-Coordinator

*[Signature]*  
HOD





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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### STUDENT CENTRIC METHODS

PROGRAM	: B.TECH ECE
CLASSANDSEMESTER	: II BTECH., II-SEM., ECE-A
ACADEMICYEAR	: 2023-2024
COURSENAME&CODE	: LINEAR INTEGRATED CIRCUIT APPLICATIONS -EC 2207
COURSEINSTRUCTOR	: MR. B. SANGEETH KUMAR, ASSISTANT PROFESSOR
TEACHINGMETHOD	: EXPERIMENTAL LEARNING
DATE	: 22-08-2024

### TOPIC: ACTIVE FILTERS



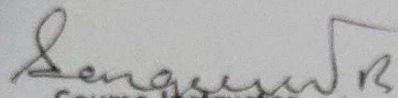
NAME OF THE EXPERIMENT: ACTIVE HIGH PASS SECOND ORDER FILTER

NAME OF THE STUDENTS: PATNALA YASASRI, PEDIREDLA SAI SUSHMA, PEDIREDLA SARANYA,

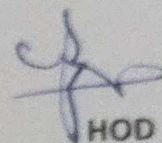
REGISTER NO: 322136412074, 322136412075, 322136412075



Experiential learning (EL) is a teaching method that involves students actively engaging with course material through hands-on experiences and reflection. Our Students involves in the Experimental Learning Process in which the Experiment from LINEAR INTEGRATED AND PULSE AND DIGITAL CIRCUITS LAB-EC 2207 of Second order Active High Pass Filter and Second Order Active Low Pass Filter to draw the frequency response.

  
Course-Instructor

  
Course-Coordinator

  
HOD





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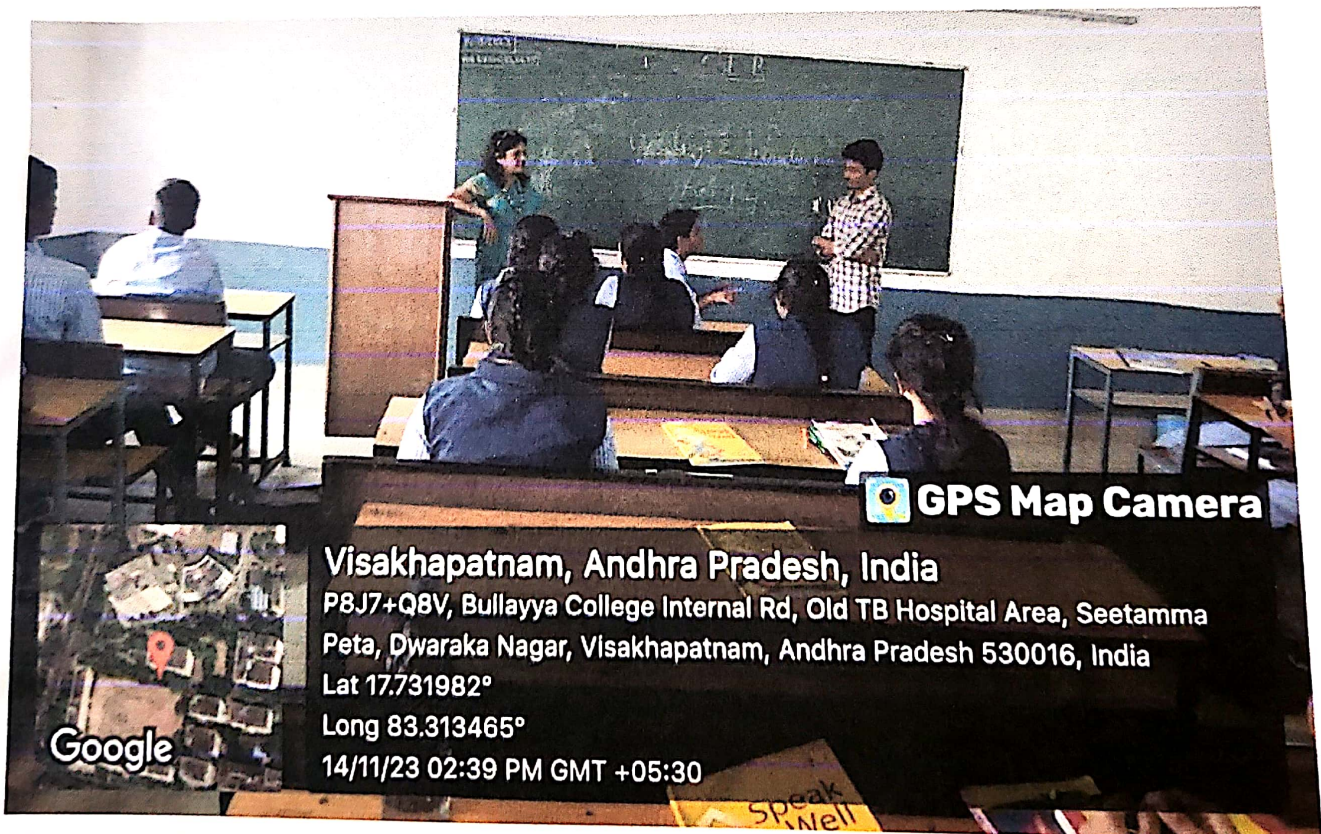
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### Innovative Teaching Methods

PROGRAM	: B.Tech CSE
CLASS AND SEMESTER	: I B.Tech., I-Sem., CSE, Section-B
ACADEMIC YEAR	: 2023-2024
COURSE NAME & CODE	: English
COURSE INSTRUCTOR	: Dr V Radha Devi
DATE	: 14 November 2023
TEACHING METHOD	: Participatory Learning
TOPIC	: Dialogue writing

**Dialogue Writing-Role Play:** The class was divided into pairs. Different contexts were given to each pair. The students were given five minutes preparation time for writing the dialogues. The pairs actively participated in the role play by enacting and presenting the dialogues of the characters assigned to them. The session helped the students to enhance their speaking skills.



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Peta, Dwaraka Nagar, Visakhapatnam, Andhra Pradesh 530016, India

Lat 17.731982°

Long 83.313465°

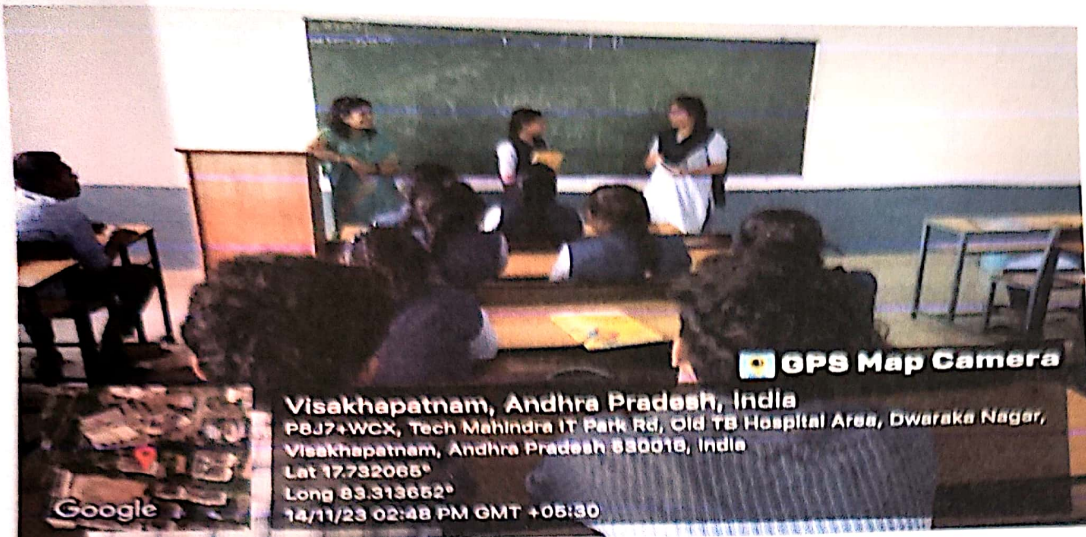
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323136410087 PASALAPUDI SINJON RAJ,

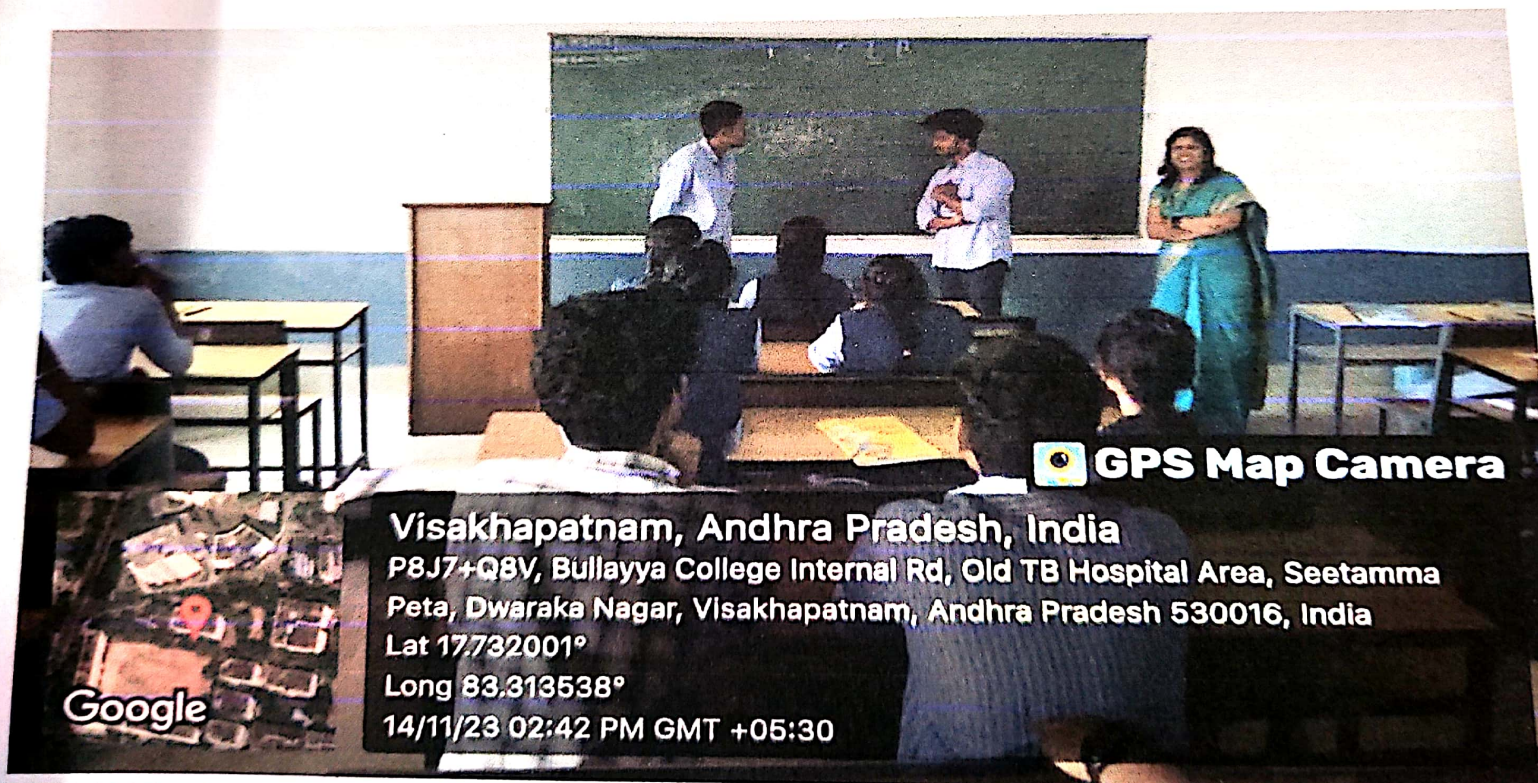
323136410069 MANDAPAKA LAXMAN







32316410070 M Bhargavi, 323136410097 P Sree Haritha



32316410073 M VARAHA DINESH GOPAL, 323136410090 PENUMATHSA VAMSI VARMA

*[Signature]*  
 Instructor

*[Signature]*  
 Course Coordinator

*[Signature]*  
 HOD

Head of the Department



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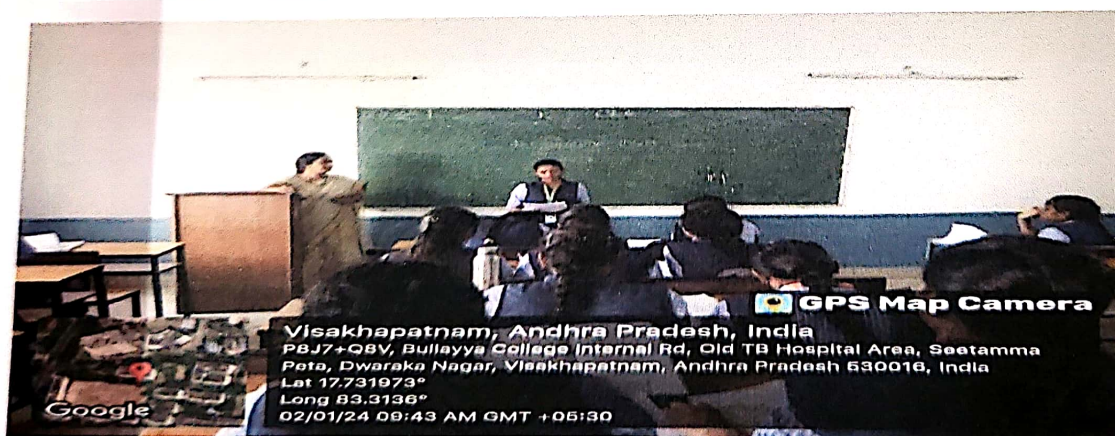
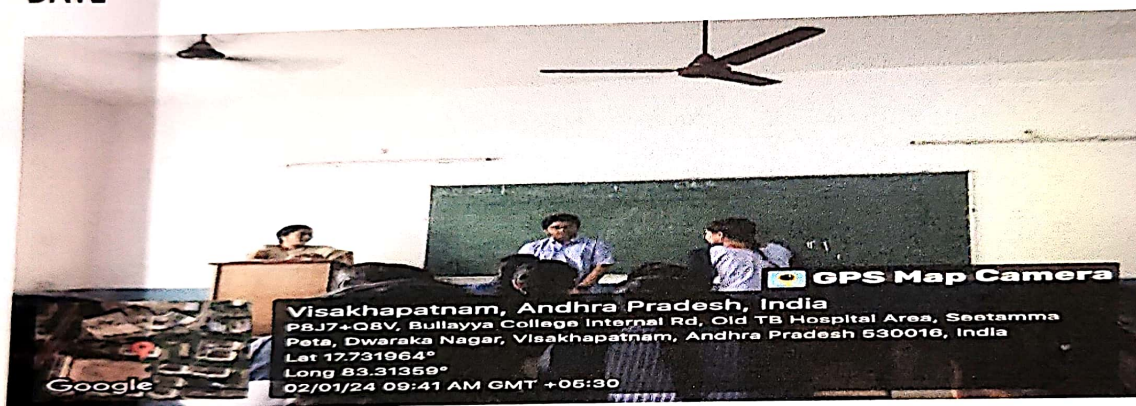
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## DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

### Innovative Teaching Methods

**PROGRAM** : B.Tech  
**CLASS AND SEMESTER** : I B.Tech., II-Sem., CSE-B  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : GREEN CHEMISTRY& 1102  
**COURSE INSTRUCTOR** : Mrs N.Swathi  
**NAME OF THE METHOD** : Participatory learning  
**TOPIC** : Corrosion  
**DATE** : 02-01-2024



Students V.Enosh Kumar, Redg No: 323136410128 & P. Mrudula, Redg No: 323136410088  
explaining Wet and Dry Corrosion.

  
Course Instructor

  
Course Coordinator

  
HOD

Head of the Department  
Dept. of Basic Sciences & Humanities  
Dr. Lankapalli Bullayya College of Engineering  
Resapuvanipalem, Visakhapatnam-530013







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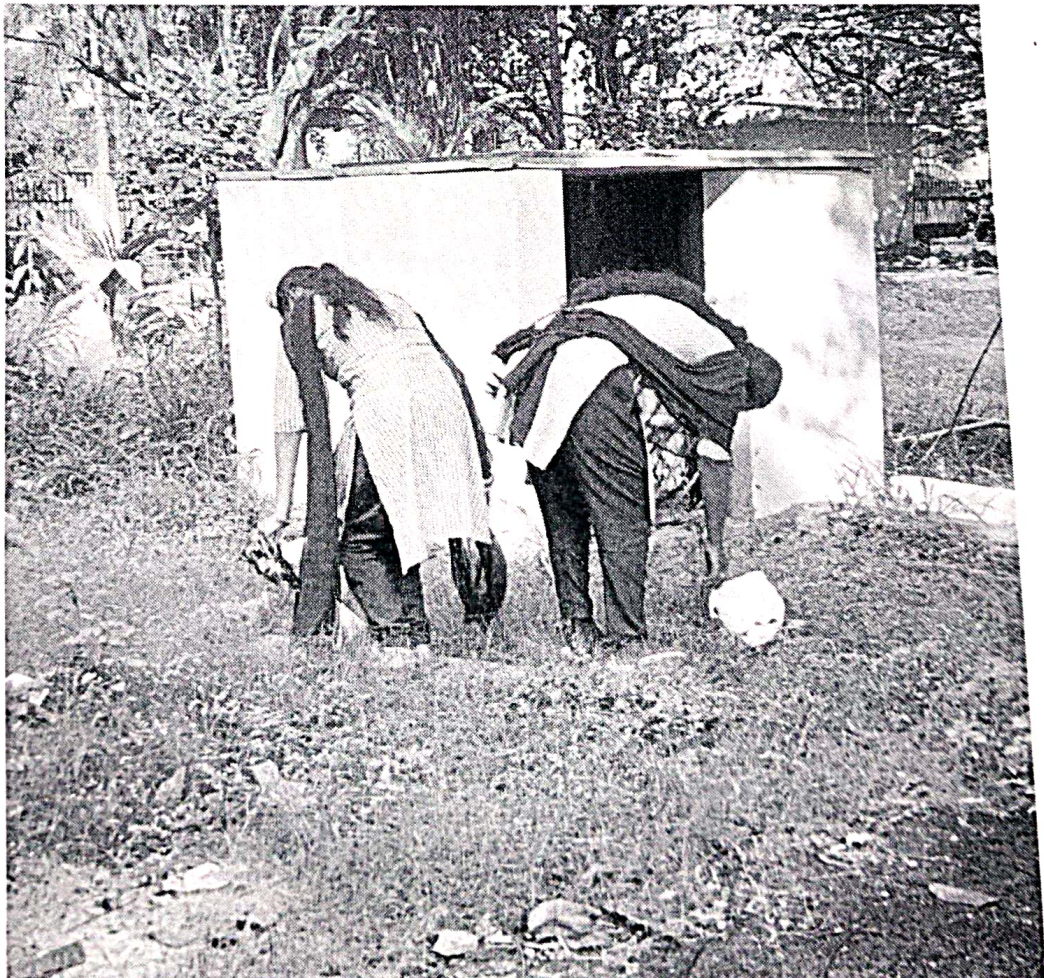
## DEPARTMENT OF CIVIL ENGINEERING

### Innovative Teaching Methods

**PROGRAM** : B.Tech CIVIL  
**CLASS AND SEMESTER** : III B.Tech., II-Sem  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : Solid Waste Management CV3205  
**COURSE INSTRUCTOR** : D V Vara Manasa  
**DATE** : 24-01-2024  
**Name of the Method** : TLM 4 (Participatory learning)


#### Name of the topic: Waste Segregation

Waste sorting is the process by which waste is separated into different elements. Waste sorting can occur manually at the household and collected through curbside collection schemes, or automatically separated in materials recovery facilities or mechanical biological treatment systems.








  
Course Instructor

  
Course Coordinator

  
HOD  
Head of the Dept.  
Dept. of Civil Engineering  
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Resapuvanipalem, Visakhapatnam-530013.A.P





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### STUDENT CENTRIC METHODS

PROGRAM	: B.TECH ECE
CLASSANDSEMESTER	: II BTECH., II-SEM., ECE-A
ACADEMICYEAR	: 2023-2024
COURSENAME&CODE	: LINEAR INTEGRATED CIRCUIT APPLICATIONS -EC 2204
COURSEINSTRUCTOR	: MR. B. SANGEETH KUMAR, ASSISTANT PROFESSOR
TEACHINGMETHOD	: PARTICIPATIVE LEARNING
DATE	: 18-07-2024

### TOPIC: ACTIVE FILTERS



NAME OF THE STUDENTS: MANGIPUDI AKHILESWARI, DEESETTY B LAKSHMI SRAVYA  
REGISTER NO: 322136412059, 322136412026

Our Students involves the learner actively in the learning process in which the Analysis of Active filters and its classifications. Active Low Pass Filter of First Order and Second Order Active Low Pass Filter working Principle and its Frequency Response.

*Sangeetha K*  
Course-Instructor

*K. Lakshmi*  
Course-Coordinator

*[Signature]*  
HOD





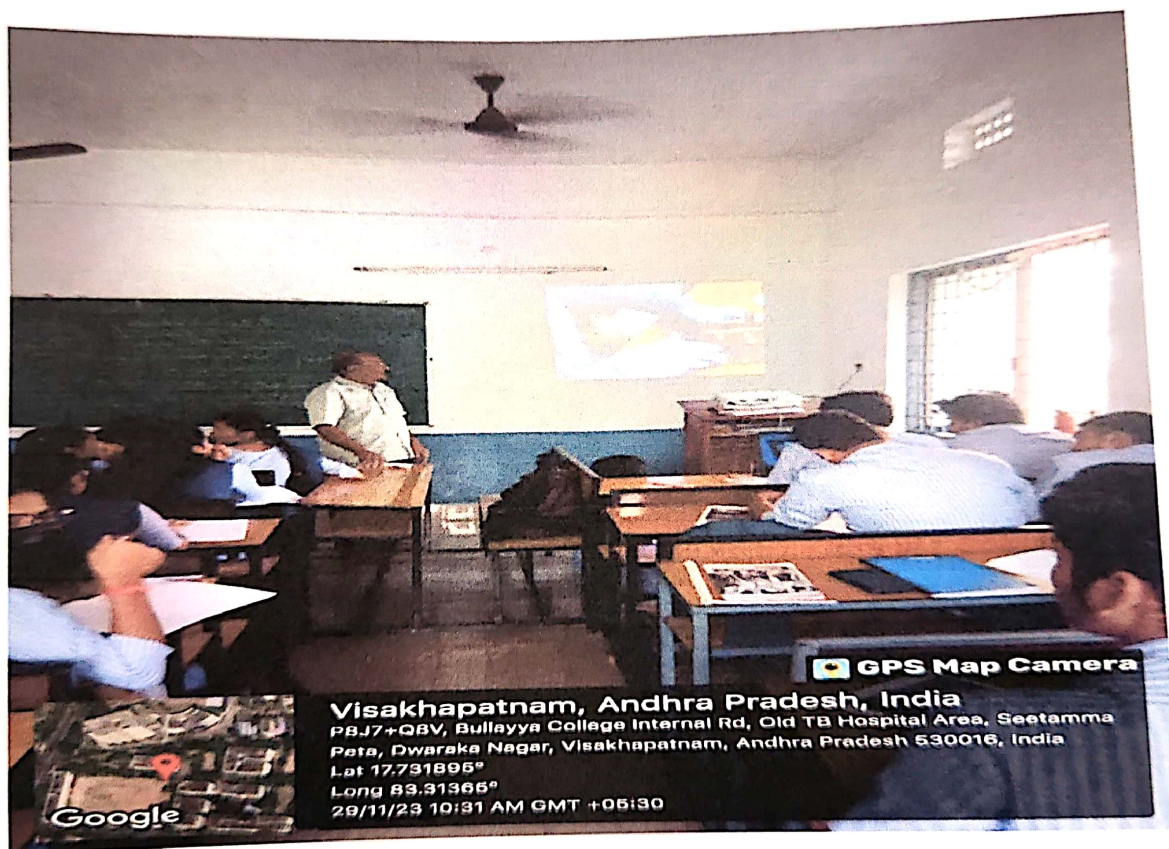
# DR. LANKAPALLI BULLAYYA COLLEGE OF ENGINEERING

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(Affiliated to Andhra University & Approved by AICTE)  
# 52-14-75, Resapuvanipalem, Visakhapatnam - 530 013.  
Ph : Off : 0891-2703293, 2703296  
Email : principal@fbce.edu.in Website : www.fbce.edu.in

## DEPARTMENT OF BASIC SCIENCES AND HUMANITIES Innovative Teaching Methods

PROGRAM : I B. Tech  
CLASS AND SEMESTER : CSE-A SEM-I  
ACADEMIC YEAR : 2023-2024  
COURSE NAME AND CODE : GREEN CHEMISTRY  
DATE : 29-11-2023  
TEACHING METHOD : Teaching Using LCD Projector  
TOPIC : Batteries


The topic was taught using a PPT by providing easy understanding, in construction of batteries. The students could understand the concept and importance. They can easily write practice test at the end of the class.



Prof. G. Lokeswara Reddy is delivering a lecture on construction of batteries.

  
Course Instructor

  
Course Coordinator

  
HOD

Head of the Department  
Dept. of Basic Sciences & Humanities  
Dr. Lankapalli Bullayya College of Engineering  
Resapuvanipalem, Visakhapatnam-530013







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Email : principal@lbce.edu.in Website : www.lbce.edu.in

## DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

PROGRAM : I/IV B.Tech  
CLASS and Semester : IB.Tech., I-Sem., CSE , Section-B  
ACADEMIC YEAR : 2023-2024  
COURSE NAME & CODE : MATHEMATICS-I, CS1101  
COURSE INSTRUCTOR : Dr G V Vijayalakshmi  
NAME OF THE METHOD : ICT TOOLS(LCD PROJECTOR)  
DATE : 9-12-2023  
TOPIC : Evaluation of Double integrals in polar coordinates

18. Evaluate  $I = \iint \frac{r dr d\theta}{\sqrt{a^2 + r^2}}$  over the loop of the lemniscate  $r^2 = a^2 \cos 2\theta$ .

Ans: In the equation of lemniscate  $r^2 = a^2 \cos 2\theta$ , putting  $r = 0$ , we get  $\cos 2\theta = 0$ , i.e.,  $\theta = \pm\pi/4$ .  
Therefore, one loop of the lemniscate  $\theta$  varies from  $-\pi/4$  to  $+\pi/4$  and  $r$  varies from 0 to  $a\sqrt{\cos 2\theta}$ .

The given region of integration is

$$R = \{(r, \theta) \in \mathbb{R}^2 / 0 \leq r \leq a\sqrt{\cos 2\theta}, -\pi/4 \leq \theta \leq +\pi/4\}.$$

Double integrals are used to calculate the area of a region, the volume under a surface, and the average value of a function of two variables over a rectangular region

Class Instructor

Class Coordinator

HOD  
Head of the Department  
Dept. of Basic Sciences & Human  
Dr. Lankapalli Bullayya College of Engin  
Resapuvanipalem, Visakhapatnam-5







# Dr. Lankapalli Bullayya College of Engineering

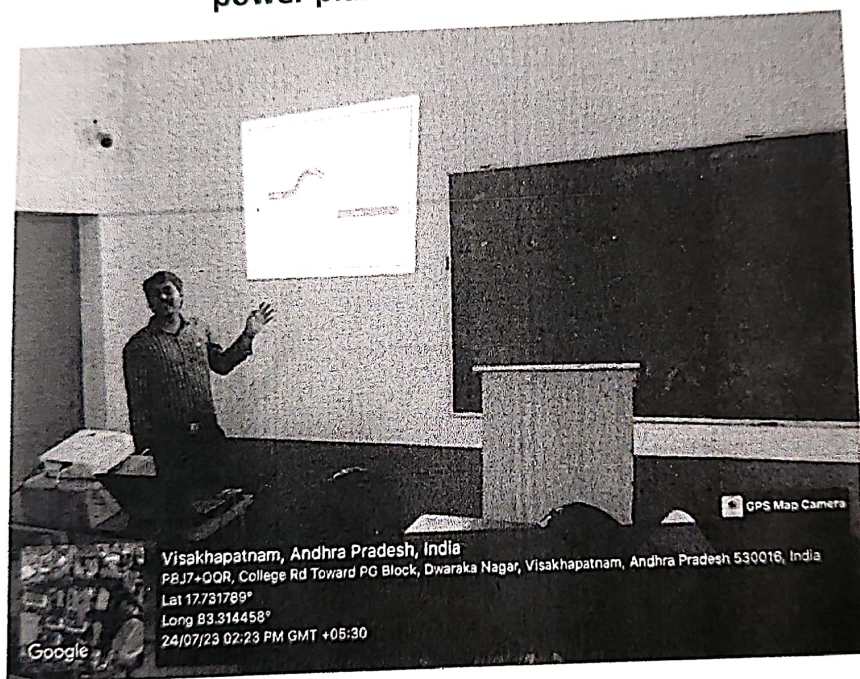
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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### Innovative Teaching Methods

PROGRAM	: B.Tech EEE
CLASS AND SEMESTER	: III B.Tech., I-Sem., EEE,
ACADEMIC YEAR	: 2023-2024
COURSE NAME & CODE	: Power systems-I
COURSE INSTRUCTOR	: Mr. Ch.Ravi Kumar
Name of the Method	: LCD Projector
Date	: 24-07-2023
Topic	: Functions of Different components of Hydro- Electric power plant



Mr. Ch. Ravi Kumar- Explaining about Functions of various components of Hydro- Electric power plant

#### Functions of Different components of Hydro- Electric power plant:

Hydroelectric power plants, also known as water power plants, use the potential energy of water stored behind a dam to generate electricity. The main components of a hydroelectric power plant include: **Dam or reservoir:** Stores water, **Penstock:** A closed canal that guides water from the reservoir to the turbine inlet nozzles, **Turbine:** Converts the kinetic energy of moving water into rotational motion, **Generator:** An electrical machine that converts the rotational motion of the turbine into electrical energy

  
Course Instructor

  
Class Coordinator

  
NOD







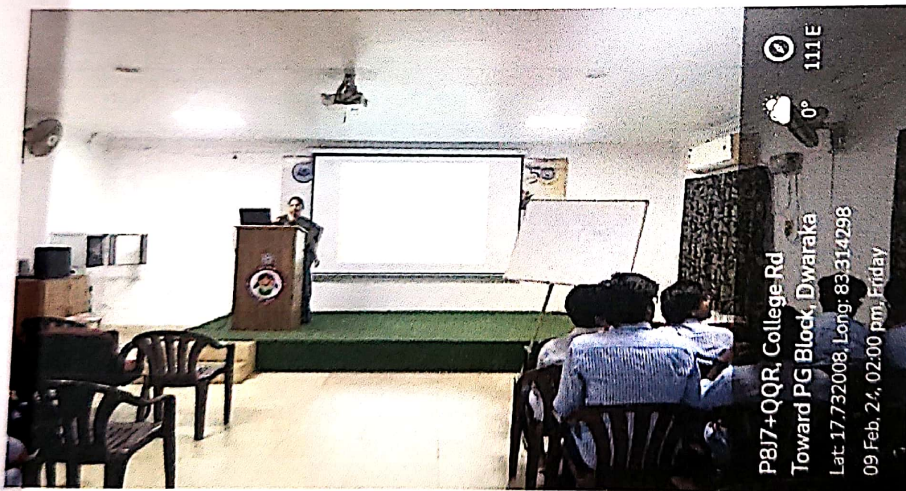
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### DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

**Program** : B.Tech CSE  
**Class And Semester** : III B.Tech., II-Sem., CSE-B  
**Academic Year** : 2023 - 2024  
**Course Name & Code** : Data Warehousing & Data Mining & 3.2.2  
**Course Instructor** : Dr. K. ANURADHA  
**Teaching Method** : LCD PROJECTOR  
**Date** : 9 - 2 - 24  
**Topic** : KDD PROCESS

**Description of the Topic:** The main objective of the KDD process is to extract information from data in the context of large databases. It does this by using Data Mining algorithms to identify what is deemed knowledge.



P8J7+QQR, College Rd  
Toward PG Block, Dwaraka  
Lat: 17.732008, Long: 83.314298  
09 Feb, 24, 02:00 pm, Friday

  
Course Instructor

  
Course Co-ordinator

  
HOD





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## DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

**PROGRAM :** B.Tech CSE

**CLASS and Semester :** III B.Tech II-Sem CSE Section-A

**ACADEMIC YEAR :** 2023-2024

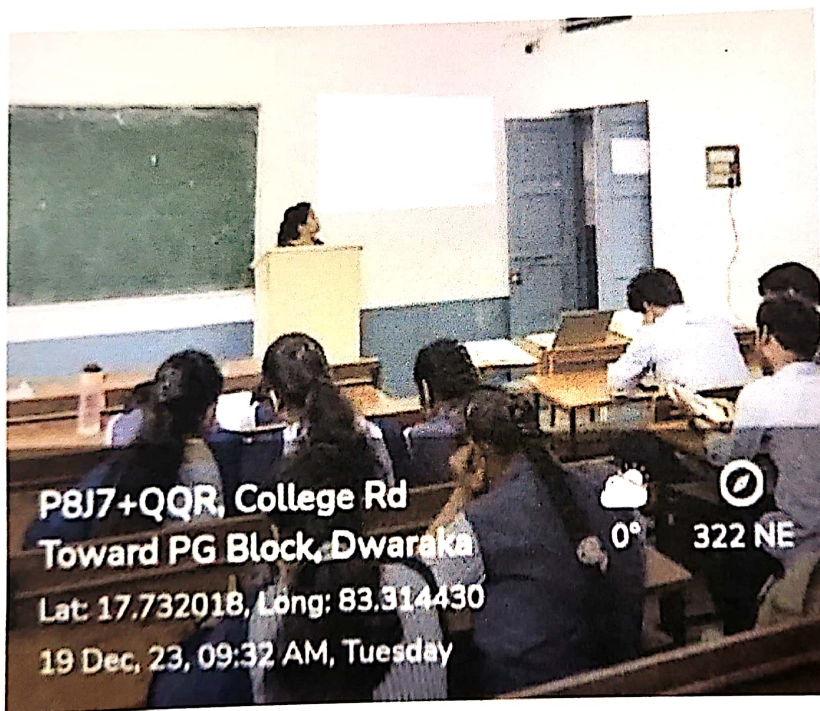
**COURSE NAME & CODE :** Object Oriented Software Engineering

**COURSE INSTRUCTOR :** K.N.Satya Chitra

**TEACHING METHOD:** LCD Projector – TLM2

**TOPIC:** Nature and Characteristics of Software

**Date:** 19-12-2023



**Software is:**

- 1) Instructions (computer programs) that when executed provide desired features, function, and performance;
- 2) Data structures that enable the programs to adequately manipulate information, and
- 3) Document that describes the operation and use of the programs.

### Characteristics of Software

- Software is developed or engineered, it is not manufactured in the classical sense.
- Software does not wear out. However it deteriorates due to change.

*K.N.Satya Chitra*  
**Course Instructor**

*K.N.Satya Chitra*  
**Course Co-ordinator**

*[Signature]*  
**HOD**







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## DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

**PROGRAM :** B.Tech CSE

**CLASS and Semester :** IV B.Tech I-Sem CSE Section-A

**ACADEMIC YEAR :** 2023-2024

**COURSE NAME & CODE :** Human Computer Interaction

**COURSE INSTRUCTOR :** K.N.Satya Chitra

**TEACHING METHOD:** Teaching using LCD Projector

**TOPIC:** Decision Making Models

**Date:** 30-08-2023

### Course Description:

This course explores the fundamental principles and practices of Human-Computer Interaction (HCI), a multidisciplinary field that studies how people interact with computers and to design technologies that let humans interact with computers in novel ways.

### Decision-Making Models:

**Rational Decision-Making Model:** Assumes users make decisions by evaluating all possible options and selecting the one that maximizes utility.

**Heuristic Decision-Making:** Users rely on rules of thumb or shortcuts, which can speed up decision-making but may lead to biases or errors.

**Bounded Rationality:** Users make decisions with limited information and cognitive resources, aiming for satisfactory rather than optimal solutions.

### Factors Affecting Decision Making:

**Information Overload:** Too much information can overwhelm users, leading to poorer decision quality.

**Framing Effects:** How information is presented can influence decisions (e.g., emphasis on potential gains versus losses).

**Risk Perception:** Users' tolerance for risk can affect their choices and interaction with systems.

**Design Considerations:**

**Clarity and Simplicity:** Interfaces should present information clearly and reduce complexity to aid decision-making.

**Feedback and Confirmation:** Providing immediate feedback and confirmation can help users make more informed decisions.

**Customization and Personalization:** Tailoring information and options based on user preferences and behavior can improve decision quality.





## PRESENTATION SLIDES:

Identify the strengths and weakness of each alternative & Select the one that best addresses the salient discrepancies

5

Implement the decision and take the steps necessary to ensure correct timing and execution. Follow-up and evaluate the results

6

**Expected Value Analysis**  
It permits decision makers to place a monetary value on the various consequences likely to result from the selection of a particular course of action.

7

**Decision Tree**  
Encompasses expected value analyses by assigning probabilities to each possible outcome and calculating payoffs for each decision path.

8

**Decision Tools**  
**Marginal Analysis**  
Analyzing decisions in terms of their incremental costs.  
**MIS**  
A mechanism to provide the manager with needed and accurate information on a regular and timely basis.

9

**Decision Making Styles**  
Everyone brings their own unique personalities and experiences to the decisions they make.  
Notwithstanding however, The decision style model outlined in your text has identified four principle styles.

10

**Decision Making Styles**  
The decision-style model assumes that people differ along two dimensions:  
• Their way of thinking (How they process information)  
• Tolerance for Ambiguity (How clear does everything have to be)

11

**Directive**  
• Low tolerance for ambiguity.  
• Seeks rationality.  
• Efficient and logical.  
• Makes quick decisions.  
• Short term focus.

12

**Analytic**  
• High tolerance for ambiguity.  
• Requires more information.  
• Considers more alternatives.  
• Careful and adaptable.

**Conceptual**  
• Very broad in outlook.  
• Considers many alternatives.  
• Good at finding creative solutions.  
• Focus long range.

**Behavioral**  
• Work well with others.  
• Concerned with achievements of subordinates.  
• Receptive to suggestions.  
• Avoids conflict.

**Ethics in Decision Making**  
**Common Rationalizations**  
• "It's not really illegal or immoral."  
• "It's in my (Organization's) best interest"  
• "No one will find out"  
• "Since it benefits the organization it will be protected"

*K. W. S. Chatter*  
Course Instructor

*K. W. S. Chatter*  
Course Co-ordinator

*DX*  
HOD





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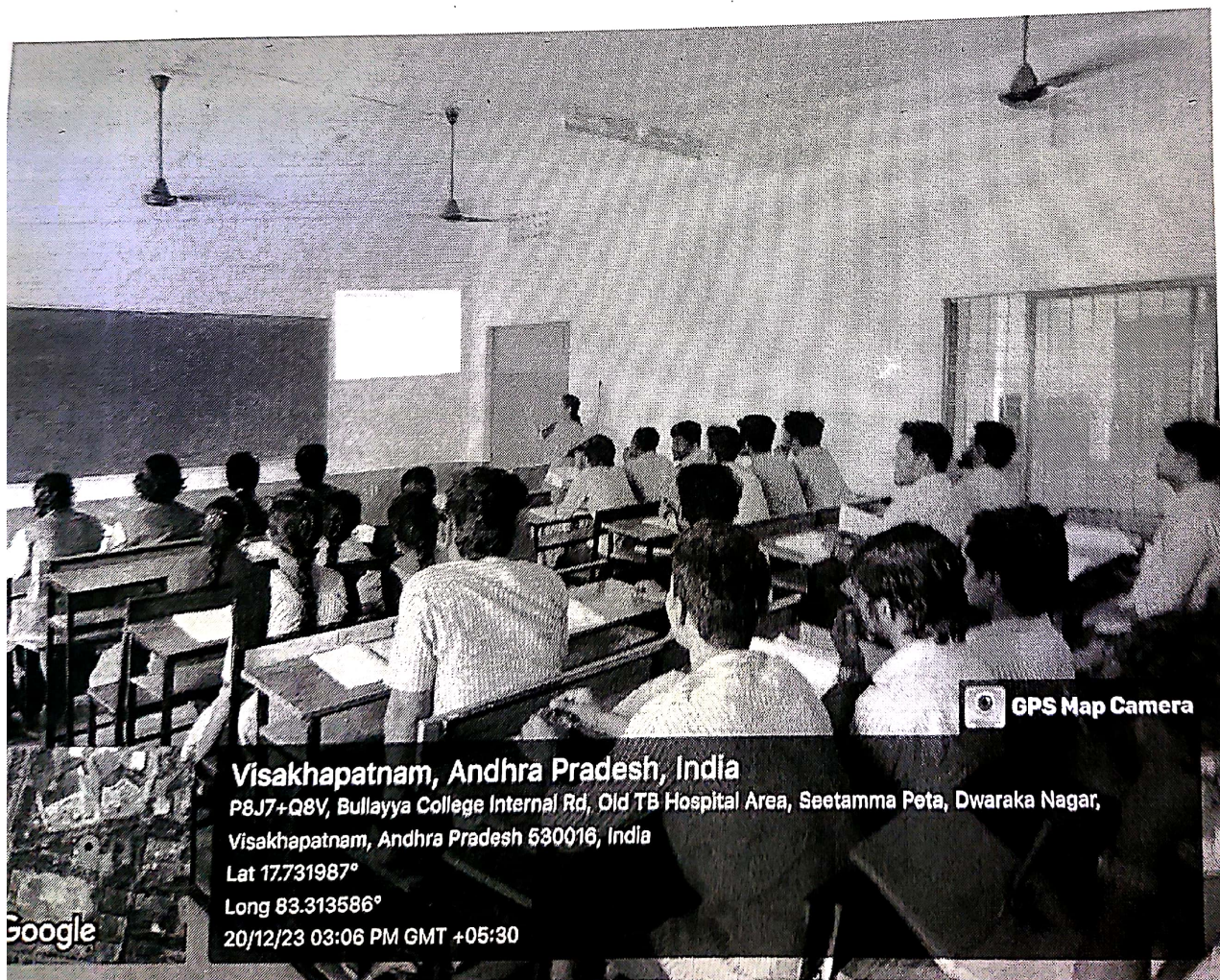
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### DEPARTMENT OF CIVIL ENGINEERING Innovative Teaching Methods

**PROGRAM** : B.Tech CIVIL  
**CLASS AND SEMESTER** : III B.Tech., II-Sem., CIVIL  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : GEE  
**COURSE INSTRUCTOR** : Mrs.P.Sridevi  
**Name of the Method** : ICT Tools  
**Teaching Learning Method 2(ICD PROJECTOR)**



GPS Map Camera

Visakhapatnam, Andhra Pradesh, India

P8J7+Q8V, Bullayya College Internal Rd, Old TB Hospital Area, Seetamma Peta, Dwaraka Nagar,

Visakhapatnam, Andhra Pradesh 530016, India

Lat 17.731987°

Long 83.313586°

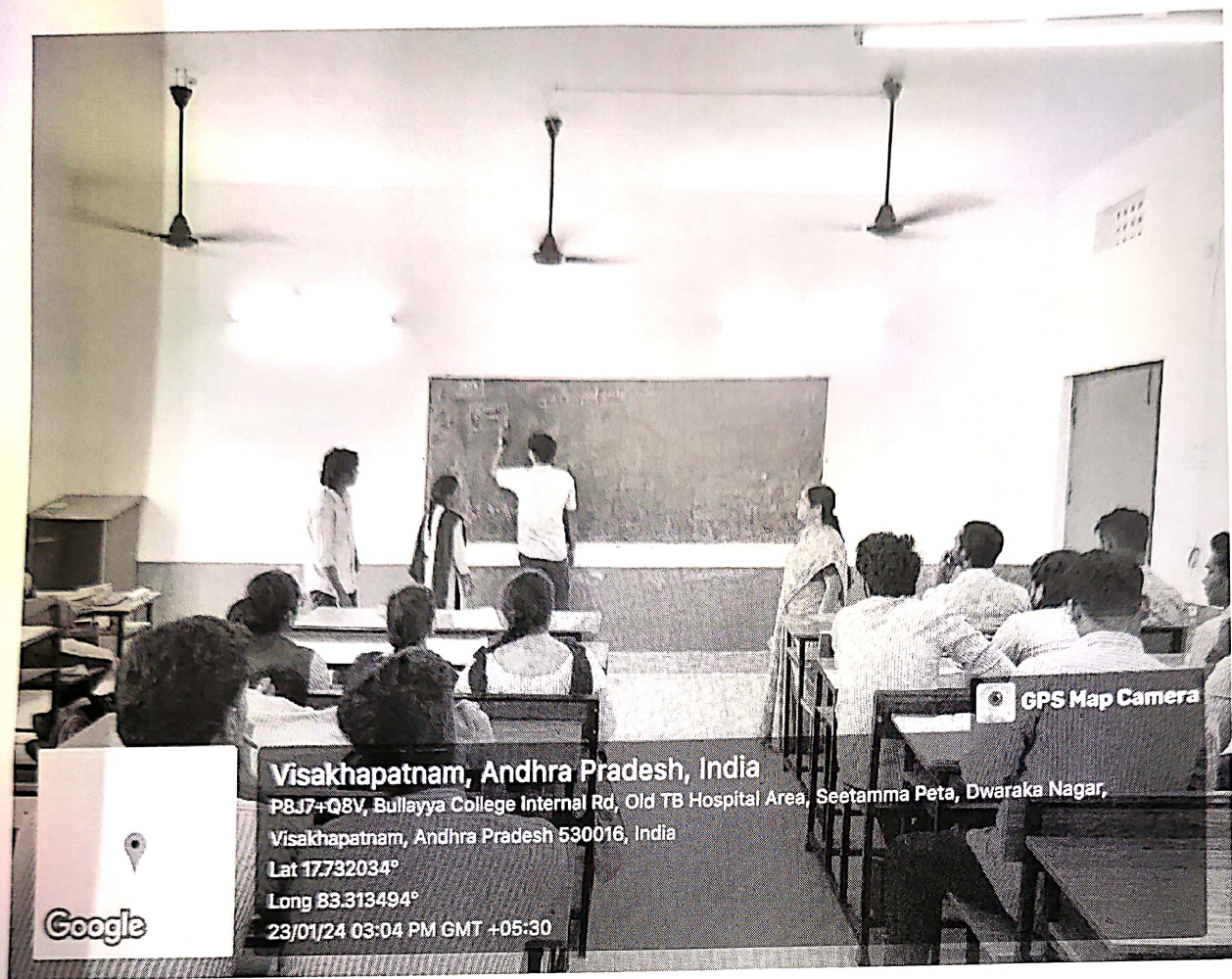
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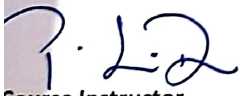




## TOPICS COVERED

### Soil Erosion

1. Factors effecting to erosion
2. Methods of soil conservation
3. Causes for soil degradation

  
 Course Instructor

  
 Course Coordinator

  
 HOD

Head of the Dept.  
 Dept. of Civil Engineering  
 Dr. Lankapalli Bullayya College of Engineering  
 Resapuvanthala, Visakhapatnam, 530016, A.P.





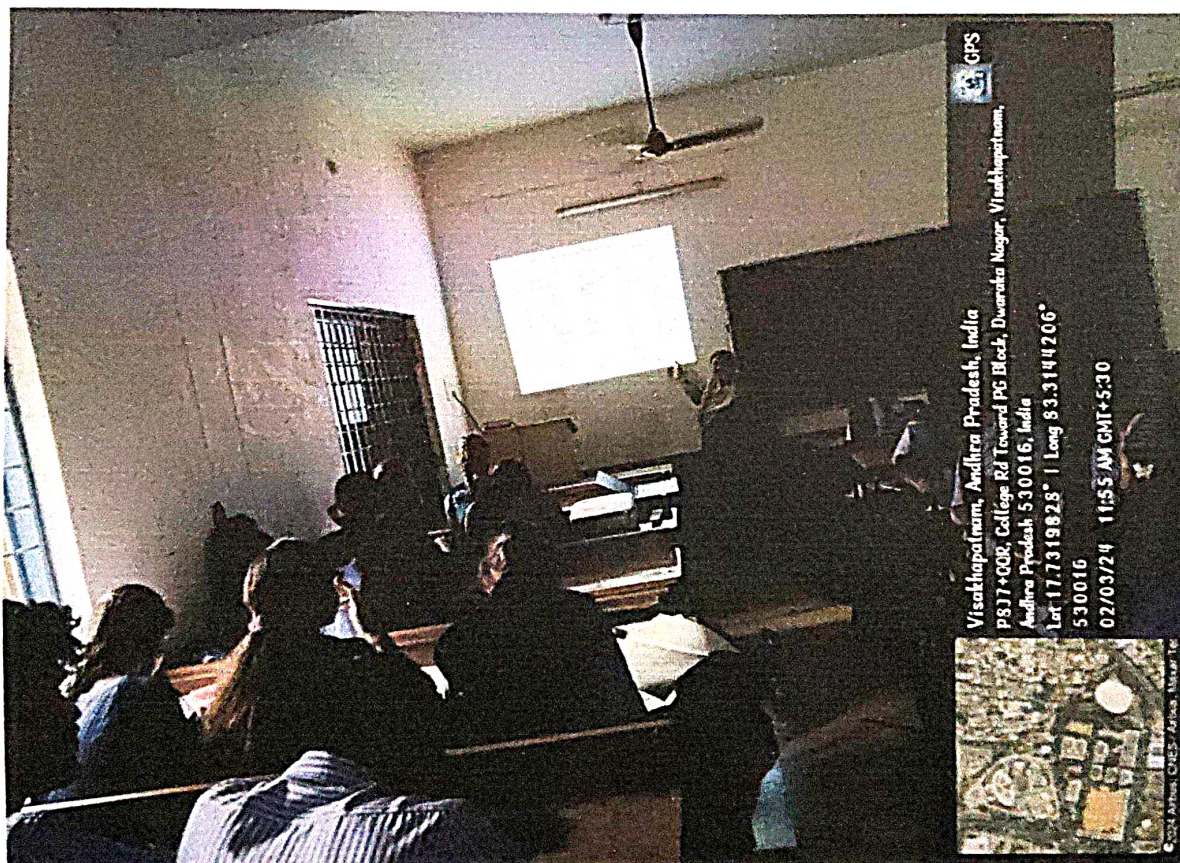
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### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Program : B.Tech ECE  
Class and Semester : III B.Tech., II-Sem., ECE-B  
Academic Year : 2023-2024  
Course Name & Code: Microwave Engineering (EC-3203)  
Course Instructor : N.Sailakshmi Kumari, Assistant Professor  
Teaching Method : LCD Projector based learning  
Date : 02-03-2024

### INNOVATIVE TEACHING



Topic: Cavity resonators

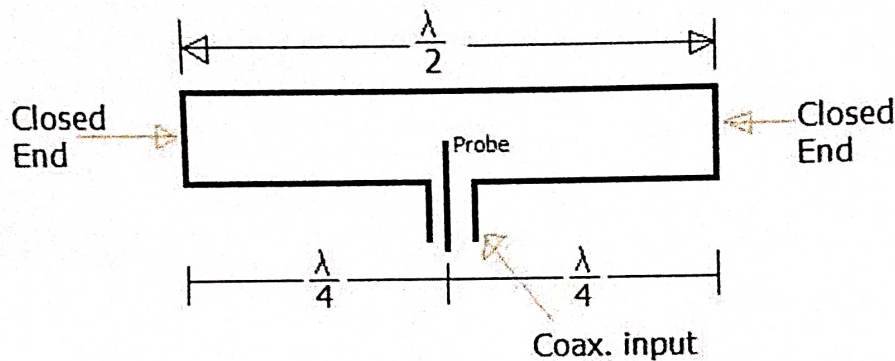
Date:02-03-24



## Cavity resonators

This page **cavity resonator** basics and also mention cavity resonator function. It mentions link to rectangular and circular cavity resonator calculators.

A waveguide is basic microwave device used for various applications. The portions of waveguide are used as directional coupler, hybrids, duplexers, circulators and even as cavity resonator.

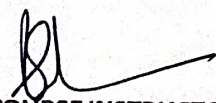


Half wavelength waveguide used as cavity resonator (side view)

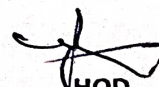
The Cavity resonator is short segment of waveguide which acts as high Q resonant circuit. As shown in the figure-1, a simple cavity resonator is formed using a short piece of waveguide  $\frac{1}{2}$  wavelength in size. A small probe is fixed at the center which injects the microwave energy. This small waveguide portion is shorted on both the ends using metallic piece.

Due to shorts at both the ends, signal injected from the probe will get bounced from the short positions on both the sides. Even if signal is not injected at the probe, wave will keep bouncing till it dies due to waveguide losses. This effect is known as resonance and circuit formed as parallel resonant circuit.

The cavity as mentioned has very high Q factor upto about 30000. Due to this fact, cavities are used to design microwave filters and other resonant circuits.

  
COURSE INSTRUCTOR

  
COURSE COORDINATOR

  
HOD





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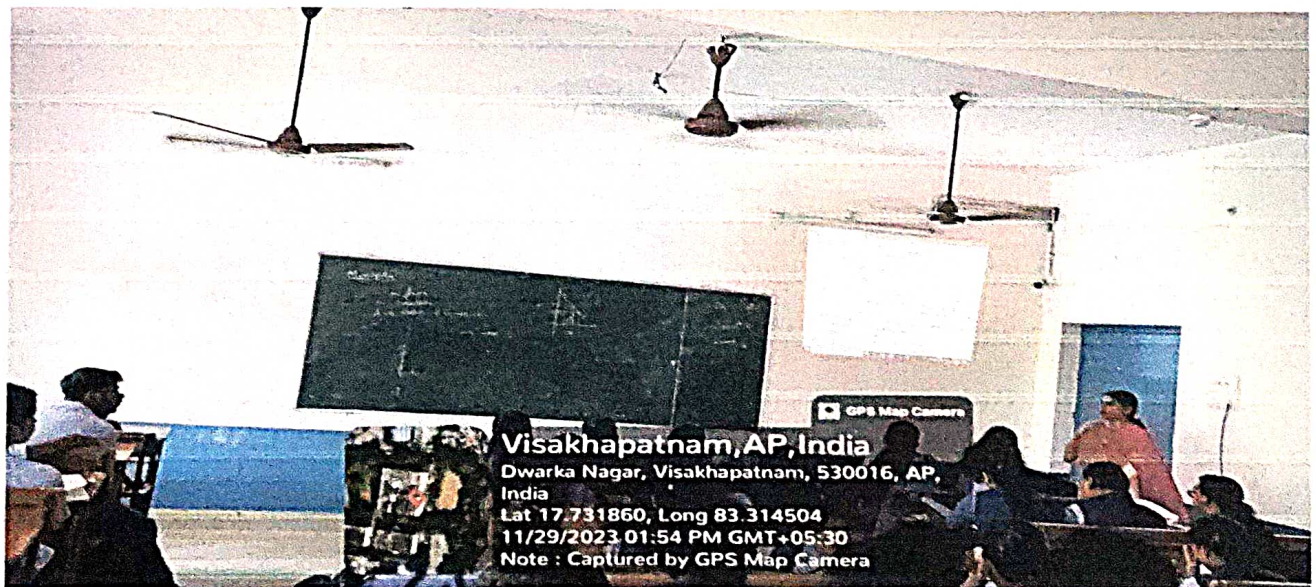
## Department Of Electronics And Communication

### Student Centric Methods

Program : B.Tech ECE  
Class and Semester : II B.Tech., I-Sem., ECE  
Academic Year : 2023-2024  
Course Name & Code : ANALOG COMMUNICATIONS, EC-2103  
Course Instructor : S. SRAVANI, Assistant Professor  
Teaching Method : Teaching using LCD Projector  
Date : 29-11-2023

### Innovative Teaching Methods

Topic: FM Modulation and Demodulation





Frequency Modulation (FM) and Frequency Demodulation are techniques used in communication systems for transmitting and receiving signals.

## **FM Modulation**

**FM Modulation** involves varying the frequency of a carrier signal in proportion to the amplitude of the input signal (the message signal). Here's a step-by-step breakdown of how FM modulation works:

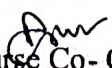
1. **Carrier Signal:** Start with a high-frequency sinusoidal signal known as the carrier signal. This is usually a pure tone with a constant amplitude and frequency.
2. **Message Signal:** The message signal is the information you want to transmit (such as audio or data). This signal can vary in amplitude and frequency.
3. **Frequency Variation:** In FM, the frequency of the carrier signal is varied in accordance with the amplitude of the message signal. Specifically, the instantaneous frequency of the carrier is shifted up or down based on the amplitude of the message signal.
4. **Modulated Signal:** The result is a modulated signal where the carrier frequency changes as the amplitude of the message signal changes. The rate of frequency deviation is proportional to the amplitude of the message signal.

## **FM Demodulation**

**FM Demodulation** is the process of extracting the original message signal from the modulated carrier signal. There are several techniques to achieve this, with two common methods being:

1. **Discriminator Method:**
  - A discriminator is a device that converts the frequency variations of the FM signal into amplitude variations. This is achieved using components like filters and detectors that respond to changes in frequency.
  - The amplitude variations are then processed to retrieve the original message signal.
2. **Phase-Locked Loop (PLL):**
  - A PLL is an electronic circuit that synchronizes its output with the frequency and phase of the input signal. In demodulation, the PLL locks onto the carrier frequency and then converts the phase difference between the input signal and the PLL reference signal into a voltage that represents the original message signal.
  - The output of the PLL is a demodulated signal that can be further processed to recover the original message.

  
Course Instructor

  
Course Co- Ordinator

  
HOD





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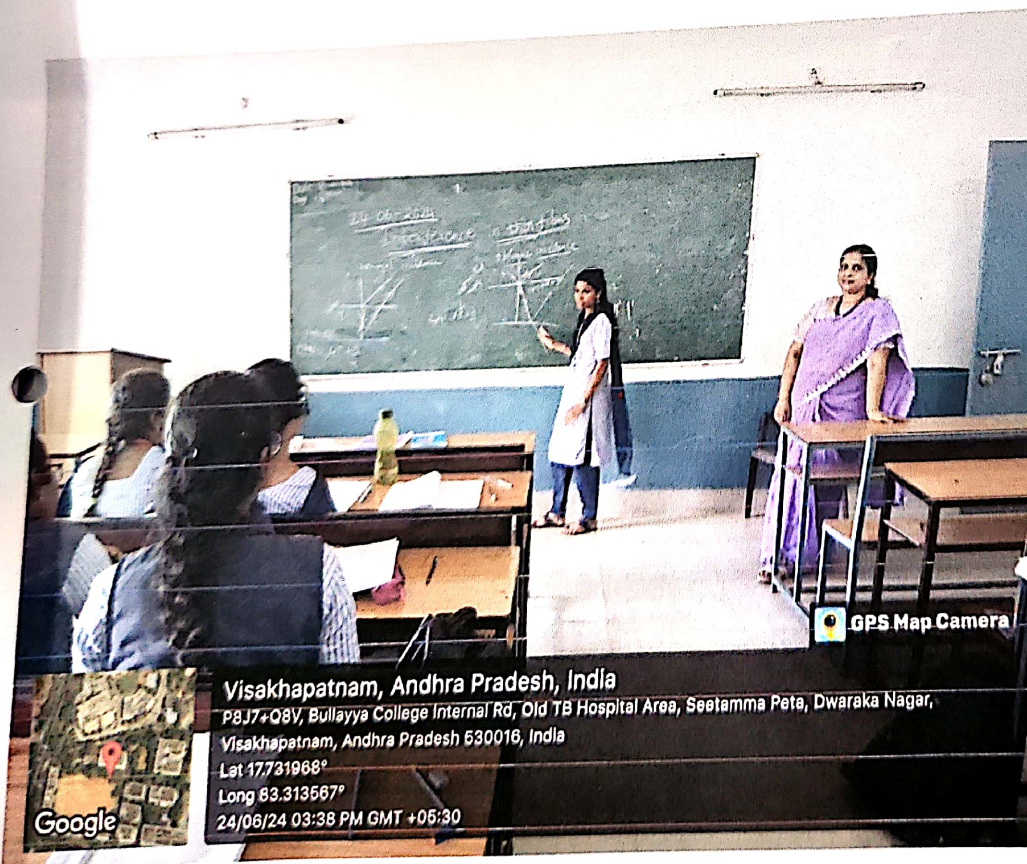
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**PROGRAM** : B.Tech CSE-8  
**CLASS AND SEMESTER** : I B.Tech., II-Sem., CSE-8  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : Engg.Physics  
**COURSE INSTRUCTOR** : S.Siva Jyothi  
**DATE** : 24-06-2024  
**Name of the Method** : Student-Centric method-Flipped class room  
**Topic** : Interference in Thin films from OPTICS-Unit-2

Pic No	Name of the Student	Roll No
1	M.BHARGAVI	323136410070
2	M.BHARGAVI	323136410070
3	S.BHANU PAVAN KALYAN	323136410117







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## DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

Program	:	B.Tech CSE
Class And Semester	:	III B.Tech., I-Sem., CSE, Section- A
Academic Year	:	2023-2024
Course Name & Code	:	ARTIFICIAL INTELLIGENCE CS3102
Course Instructor	:	Syed Mujib Rahaman
Course Coordinator	:	Syed Mujib Rahaman
Teaching Method	:	Flipped Class Room
Pre-Requisite	:	Knowledge in Data Structures, Basic Mathematical Knowledge

Topic: LISP Programming

AY: 2023-24

Class: III/IV B.Tech CSE

Date: 15-09-2023

LISP (LISt Processing) is one of the oldest programming languages, known for its strong support for symbolic computation and recursive functions. It was developed in 1958 by John McCarthy and is widely used in artificial intelligence research. LISP's unique feature is its use of linked lists as the primary data structure, enabling powerful manipulation of symbols and expressions. The language allows for dynamic typing and has a distinctive, fully parenthesized prefix notation. Despite its age, LISP has influenced many modern programming languages and continues to be used in specialized applications.



*S. M. R.*  
Course Instructor

*S. M. R.*  
Course Coordinator

*[Signature]*  
HOD





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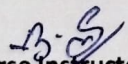
### DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

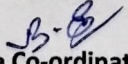
**Program** : B.Tech CSE  
**Class And Semester** : II B.Tech., II-Sem., CSE-A  
**Academic Year** : 2023-24  
**Course Name & Code** : : Data Base Management System [TH-07BENG-2229]  
**Course Instructor** : B. Santos Kumar  
**Teaching Method** : TLM 6 (Flipped/Blended Learning )  
**Date** : 15-04-2024  
**Topic** : SQL Basics: Joins, SQL Basics: Subqueries, Normalization

#### Description:

In preparation for class, assign relevant readings on SQL Basics: Joins, SQL Basics: Subqueries, Normalization in data base management systems. Encourage students to review this material beforehand. During class, facilitate discussions, problem-solving sessions, and group activities. Use practical examples to programming concepts.



  
Course Instructor

  
Course Co-ordinator

  
HOD





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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### STUDENT CENTRIC METHODS

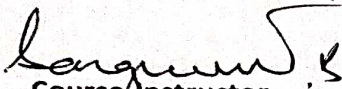
**PROGRAM** : B.TECH ECE  
**CLASSANDSEMESTER** : II BTECH., II-SEM., ECE-A  
**ACADEMICYEAR** : 2023-2024  
**COURSENAME&CODE** : LINEAR INTEGRATED CIRCUIT APPLICATIONS -EC 2204  
**COURSEINSTRUCTOR** : MR. B. SANGEETH KUMAR, ASSISTANT PROFESSOR  
**TEACHINGMETHOD** : FLIPPED LEARNING  
**DATE** : 09-05-2024

### TOPIC: DIFFERENTIAL AMPLIFIER



**NAME OF THE STUDENT: KOLIPAACA PARIMALA KRUPA**  
**REGISTER NO: 322136412045**

Analysis of Deferential Amplifier and discussing about Block Diagram of the Differential amplifier, Transistorized Differential Amplifier, different configurations of Differential Amplifier and analysis of the output Voltage of Differential Amplifier.

  
Course-Instructor

  
Course-Coordinator

  
HOD





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**DEPARTMENT OF BASIC SCIENCES AND HUMANITIES**

**PROGRAM** : I/IVB.Tech  
**CLASS AND SEMESTER** : I B.Tech CIVIL;Semester-I  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : Engineering Physics, CV1102  
**COURSE INSTRUCTOR** : S.Siva Jyothi  
**NAME OF THE METHOD** : Tutorial  
**TOPIC** : Entropy and Second Law of Thermodynamics  
**DATE** : 13-10-2023

**TUTORIAL – Questions**

**UNIT-I**

- 1.Distinguish reversible and irreversible processes? How does the entropy changes in each one of these processes?
2. State and explain Second law of thermodynamics. Describe Kelvin's scale of temperature.
- 3.Derive an expression for the work done in compressing a gas in an isothermal process.





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## DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

**PROGRAM** : I/IV B.Tech  
**CLASS AND SEMESTER** : IB.Tech., I-Sem., CSE, Section-B  
**ACADEMIC YEAR** : 2023-2024  
**COURSE NAME & CODE** : MATHEMATICS-I, CS1101  
**COURSE INSTRUCTOR** : Dr G V Vijayalakshmi  
**NAME OF THE METHOD** : Problem Solving (Tutorial)  
**TOPIC** : Euler's theorem & Generalized mean value theorems  
**DATE** : 04-11-23

1. IF  $u = \tan^{-1} \left( \frac{x^3 + y^3}{x - y} \right)$ , prove that  $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} = \sin 2u$
2. Verify Lagrange's theorem for  $f(x) = \sin x$  in  $(0, \pi)$ .
3. Prove that  $\log(1+x) = \frac{x}{1+\theta x}$ , where  $0 < \theta < 1$  and hence deduce

$$\frac{x}{x+1} < \log(1+x) < x; \quad x > 0$$





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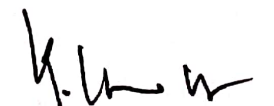
## DEPARTMENT OF BASIC SCIENCES AND HUMANITIES Tutorial V

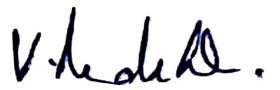
PROGRAM  
CLASS AND SEMESTER  
ACADEMIC YEAR  
COURSE NAME & CODE  
COURSE INSTRUCTOR  
DATE  
TOPIC

: B.Tech CSE  
: I B.Tech., I-Sem., CSE, Section-B  
: 2022-2023  
: English  
: Dr V Radha Devi  
: 10 March 2023  
: Letter & Email Writing

1. Write a letter to the Principal of your college requesting to conduct a Technical Fest.
2. Write an email to your friend about your College.

  
Course Instructor

  
Course Coordinator

  
HOD







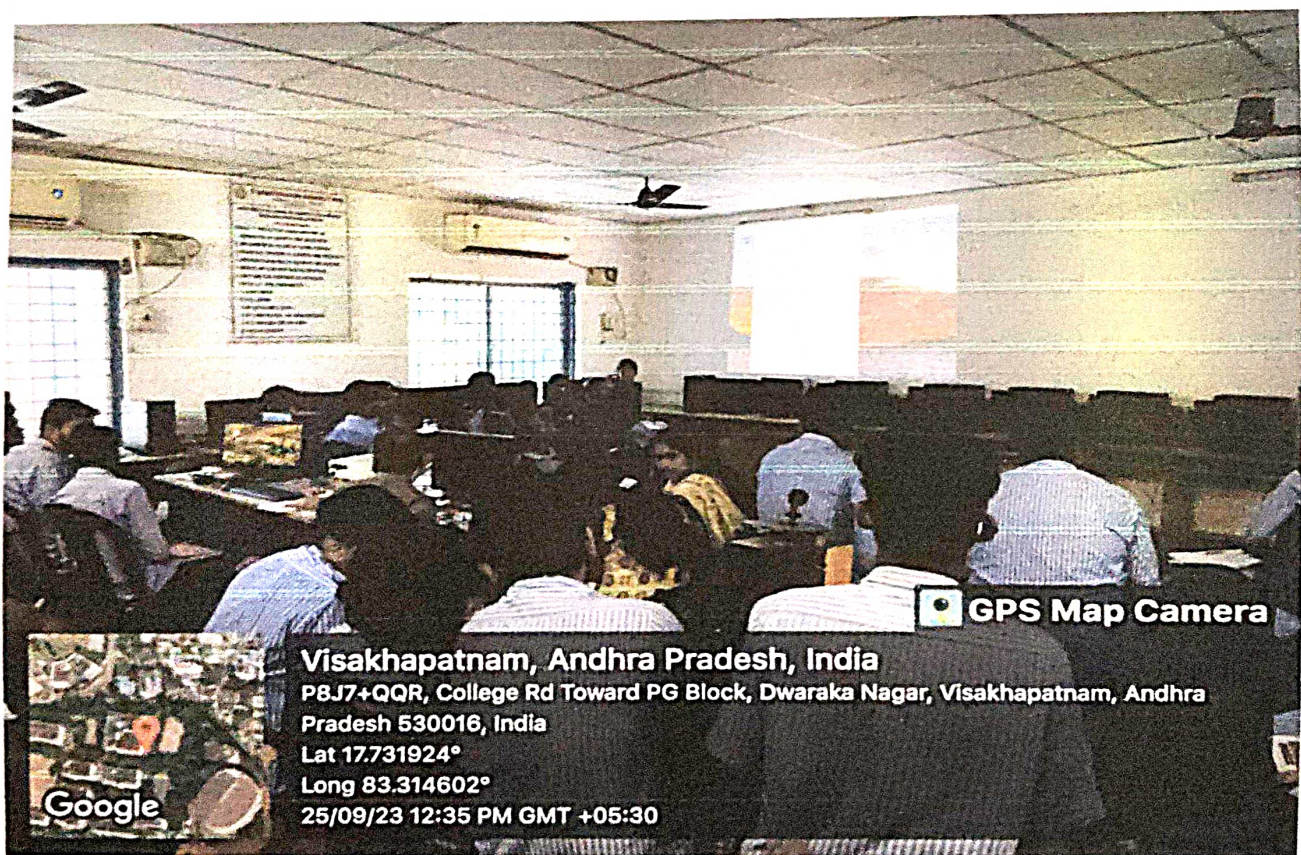
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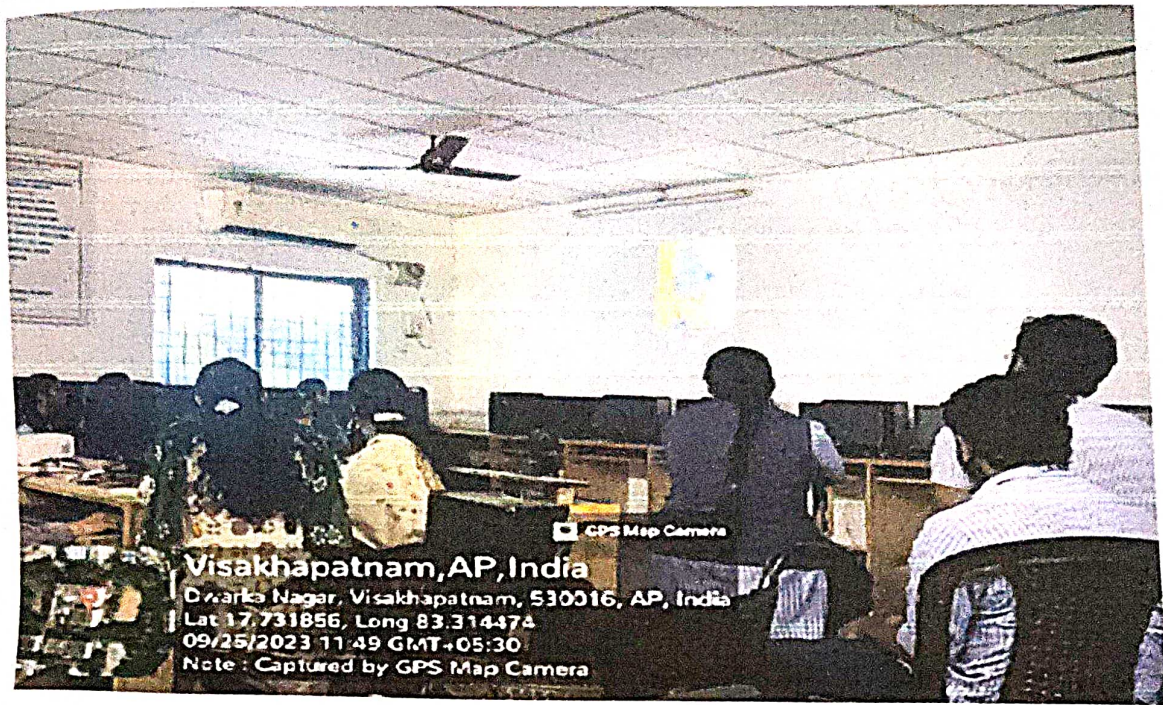
### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Program : B.Tech ECE  
Class and Semester : IV B.Tech., I-Sem., ECE, Section-A  
Academic Year : 2023-2024  
Course Name & Code : Internet of Things  
Course Instructor : R.SHARON, Assistant Professor  
Teaching Method : Projector Based Learning  
Date : 25-09-2023

### INNOVATIVE TEACHING







Topic:Controlling AC Power Devices with Relays Date:25-09-2023

- A relay is an electrically operated switch that allows you to control a high-voltage circuit with a low-voltage signal.
- Relay modules typically have three main terminals:
  - **NO (Normally Open):** The device is off until the relay is activated.
  - **NC (Normally Closed):** The device is on until the relay is activated.
  - **COM (Common):** The common terminal for both NO and NC.
  - **Connect the Raspberry Pi's 5V or 3.3V GPIO pin to the VCC pin of the relay module.**
  - **Connect a GPIO pin from the Raspberry Pi to the IN pin on the relay module. This pin will control the relay.**
  - **Connect the GND pin on the Raspberry Pi to the GND pin on the relay module.**

  
Course Instructor

  
Course Co-ordinator

  
HOD





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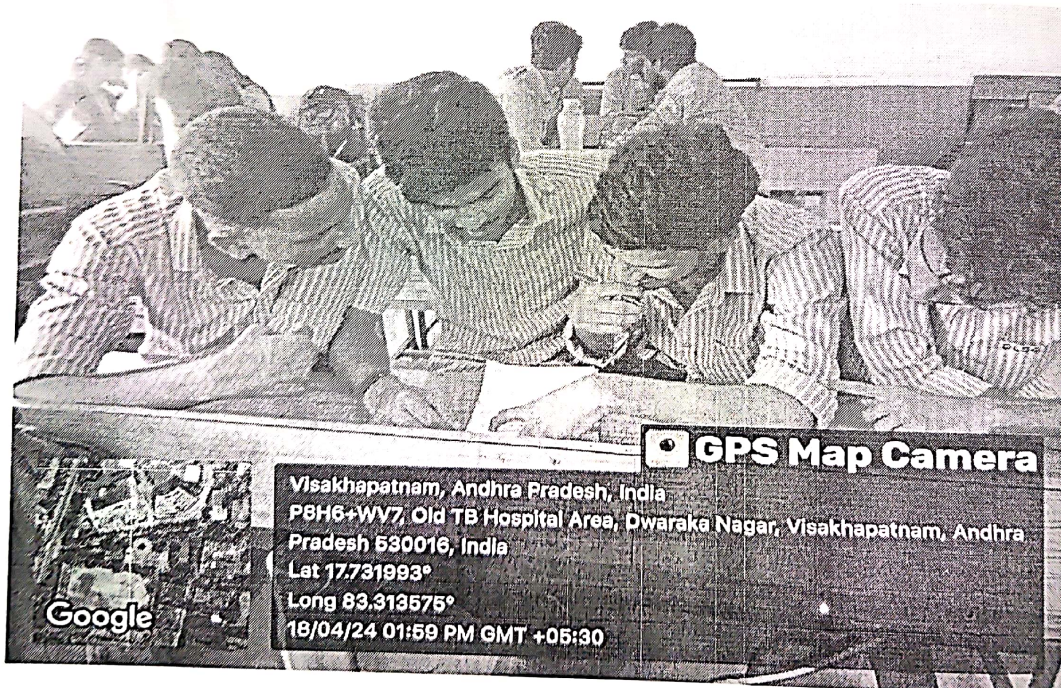
### DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

#### Peer Learning Methods

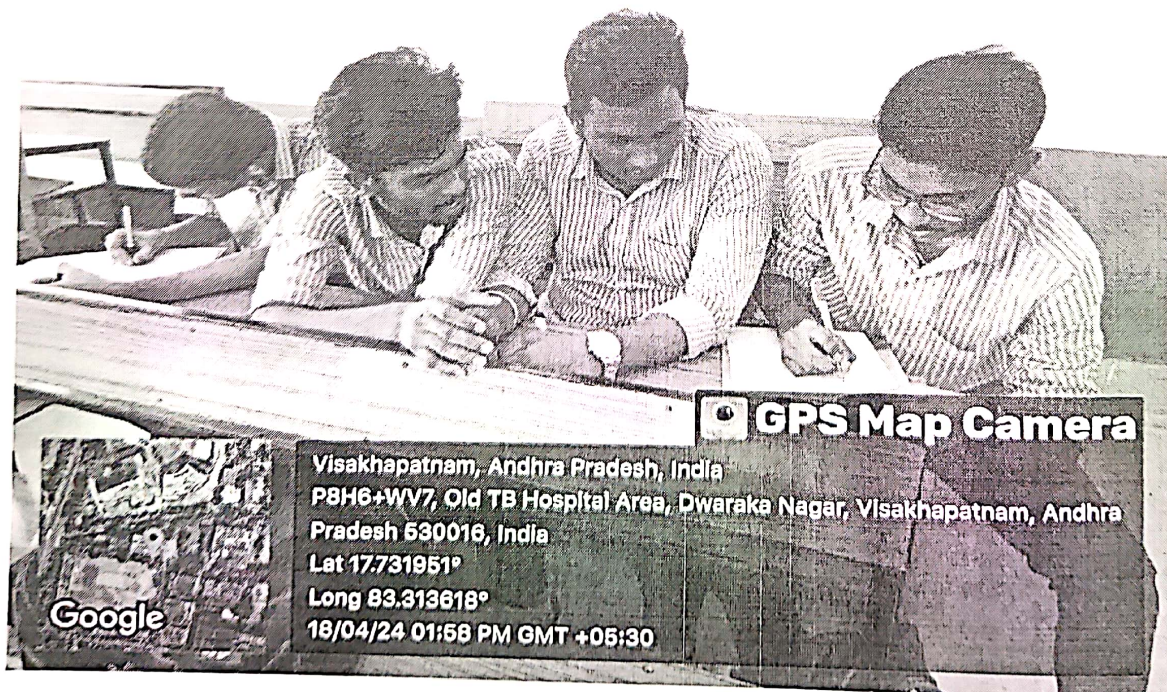
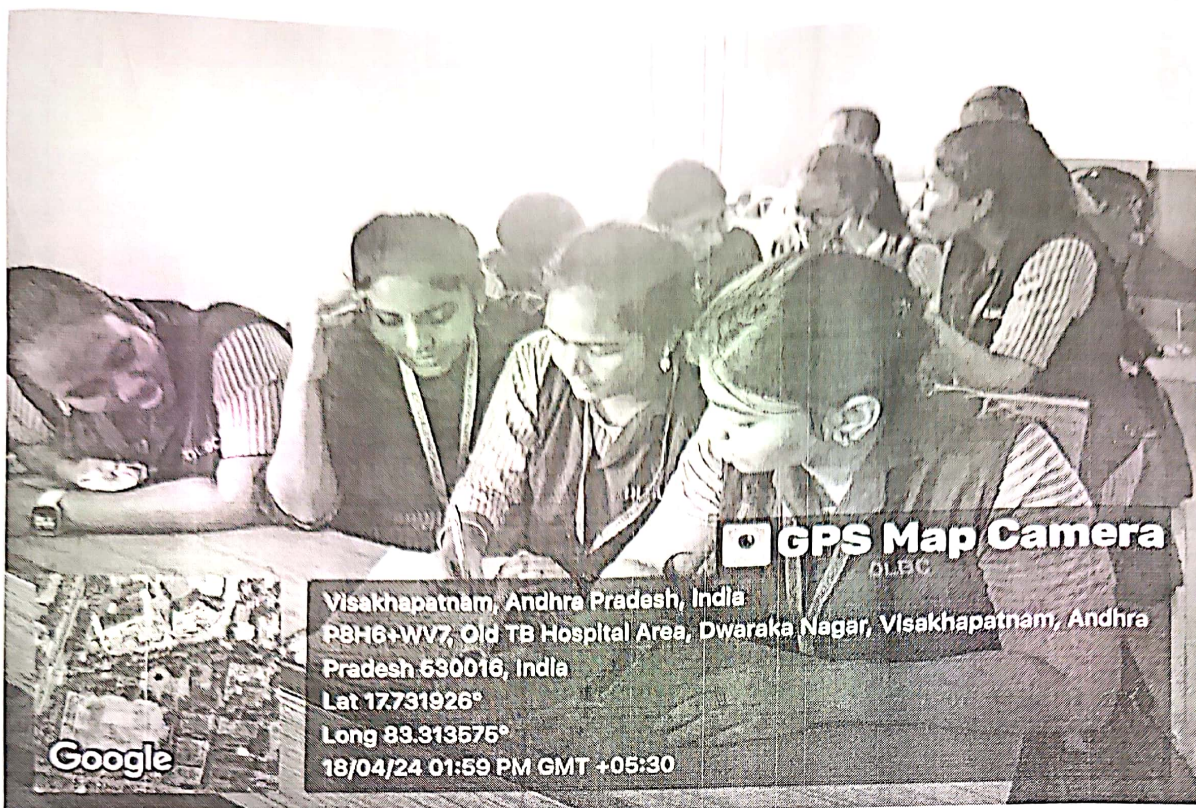
PROGRAM : B.Tech CSE  
CLASS AND SEMESTER : I B.Tech., I-Sem., ECE, Section-B  
ACADEMIC YEAR : 2023-2024  
COURSE NAME & CODE : English  
COURSE INSTRUCTOR : Dr V Radha Devi  
DATE : 18 April 2024  
TEACHING METHOD : Peer Learning  
TOPIC : Guided Composition

#### Guided Composition:

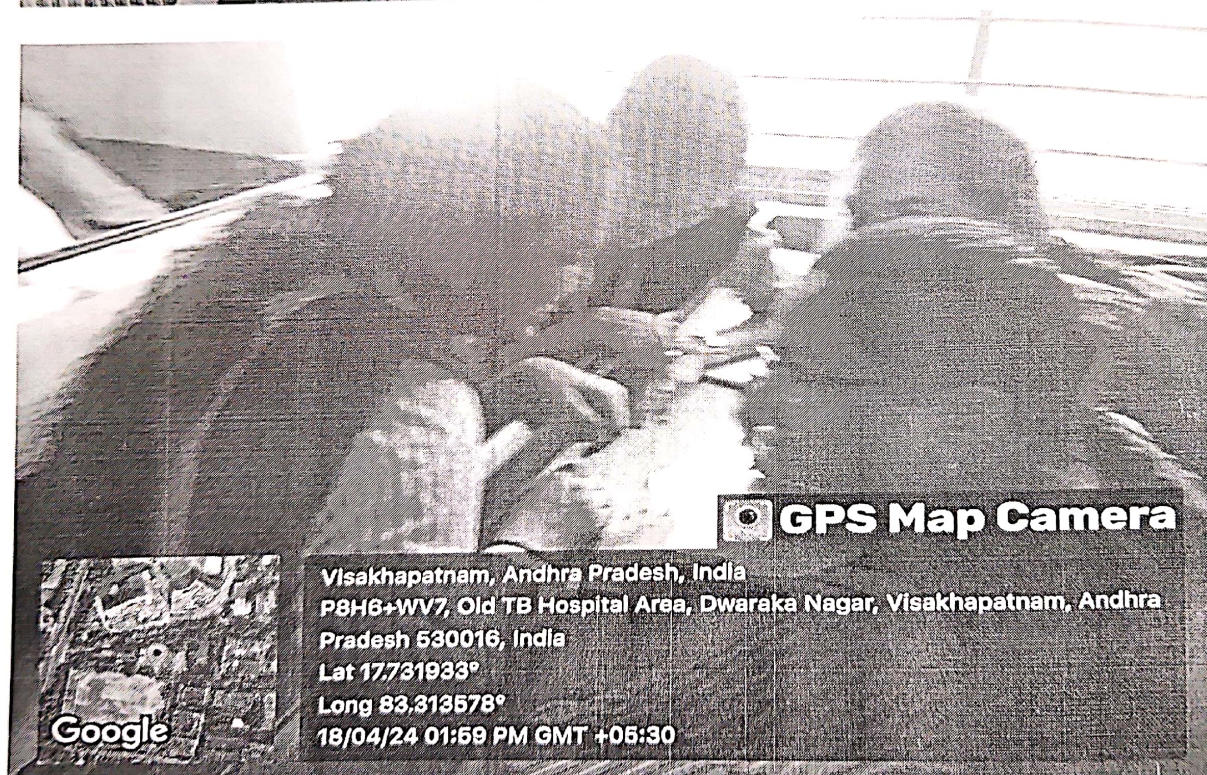
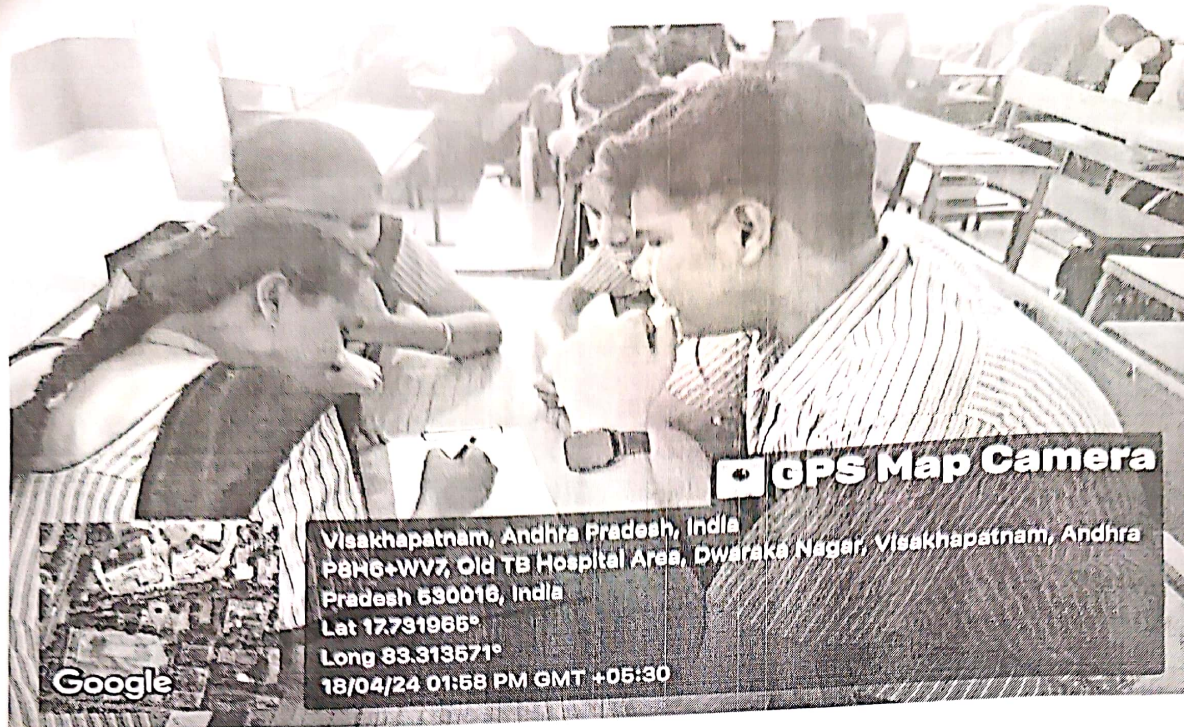
After the session on Guided Composition, the students were divided into teams of three, topics and the hints to develop a composition were given. Each team was given 10 minutes to compose a paragraph by using the hints given. After the written task, the students orally presented the composition created by them. The teams actively participated in the role play by enacting and presenting the dialogues of the characters assigned to them. The session helped the students to enhance their speaking skills and team spirit.











V. Kumar Desai  
 Course Instructor

*[Signature]*  
 Course Coordinator

V. Kumar Desai  
 HOD  
 Head of the Department  
 Dept. of Basic Sciences & Humanities  
 Dr. Lankapalli Bullayya College  
 Rajamahendravaram, AP





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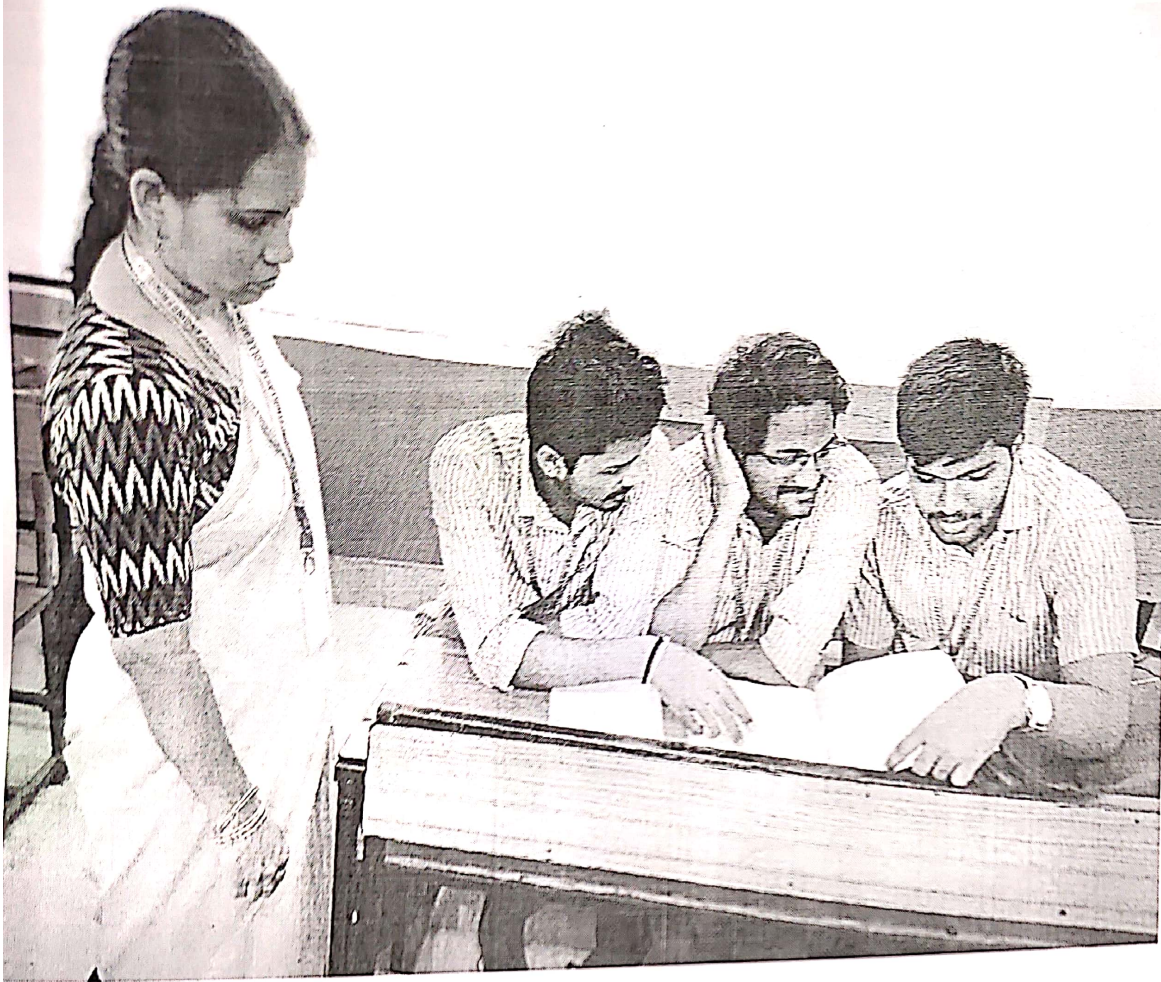
**DEPARTMENT OF BASIC SCIENCES AND HUMANITIES**  
**BEST PRACTICE**  
**Peer Learning Methods**

PROGRAM : B.Tech CSE  
CLASS AND SEMESTER : 1 B.Tech., 1-Sem., CSE, Section-A  
ACADEMIC YEAR : 2023-2024  
COURSE NAME & CODE : Mathematics-II  
COURSE INSTRUCTOR : Dr G V Vijayalakshmi  
DATE : 19-07-2024  
TEACHING METHOD : Peer Learning  
TOPIC : Linear Differential Equation ( Particular Integral of all cases)

After completion of some topics, the students were divided into groups of five students by leading with one merit students. They are discussing their doubts on these topics and then the students were write the class test or Assignments on these topics.



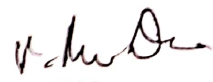




Givula

Course Instructor

  
Course Coordinator

  
HOD

Head of the Department  
Dept. of Basic Sciences & Humanities  
Dr. Lankapalli Bullayya College of Engineering  
Resapuvanipalem, Visakhapatnam-530