NNRG NALLA NARASIMHA REDDY
Education Society's Group of Institutions - Integrated Campus
(UGC AUTONOMOUS INSTITUTION)

EAMCET| ICET| PGECET Code

**School of Engineering**
**Department of Electronics and Communication Engineering**

**Academic Year:** 2025-26 **Date:** 23-02-2026

# TEACHING ACTIVITY SHEET

## Course Details

| | | | |
|---|---|---|---|
| **Class** | **: II B. Tech. II Sem** | **Course Name** | : Analog & Digital Communications |
| **Module Name** | : Communication & Networks | **Course Coordinator** | : Mr.N.Raju |
| **Module Coordinator** | : Dr.S.Rekha | **Course Instructor(s):** | **1.** Mrs.D.Bindu Tushara<br>**2.**Mr.K. Rambabu |

**Gap(s) identified in the course:**

**1.** Students often memorize the block diagram of a communication system without understanding how it works in real life.

**Gap(s) bridged by conducting the activity:**

1. This activity converts abstract theory into a live demonstration, helping students connect concepts with practical understanding.

## Teaching Activity Details

**Unit No: I** **Time & duration:** 10:00 AM to 11:00 AM(1 Hour) **Venue: S-02**

**Teaching Approach: Role-Play Approach**

**Covered Topics:** Communication System & Impact of noise

**Utilization of ICT: No**

**Remarks (If Any)**

**Tabel: Impact Analysis of the activity**

| Objectives | Outcomes | POs & PSOs Coverage | SDG Addressed | Impact Analysis | |
|---|---|---|---|---|---|
| | | | | No. of attendees | No. of beneficiaries |
| 1. To understand the components of a basic communication system. | 1. Students identified and explained the function of each block in the communication system. | PO1, PO2 | SDG 4 | 20 | 20 |

**Brief Report of the Activity with photographs**

**Subject:** Analog & Digital Communications

**Topic:** Working of Basic Communication System and Impact of noise

**Students Batch:** II Year Electronics and Communication Engineering Students

**Role-Play Goal:** The activity was conducted to help students understand the components and working of a Basic Communication System through an interactive role play method. The aim was to enhance conceptual clarity regarding signal transmission, reception, and the effect of noise.

## Scenario Title

**"From Voice to Receiver – Journey of a Message"**

## Background of the Scenario

A student wants to send an important message to another student located at a distance. Since direct communication is not possible, the message must pass through a communication system consisting of multiple components.

The activity demonstrates how a message travels from source to destination and how noise affects transmission.

## Setting

- Location: Classroom
- Students arranged in sequence representing system blocks
- One student acts as disturbance (Noise)

SystemFlow:

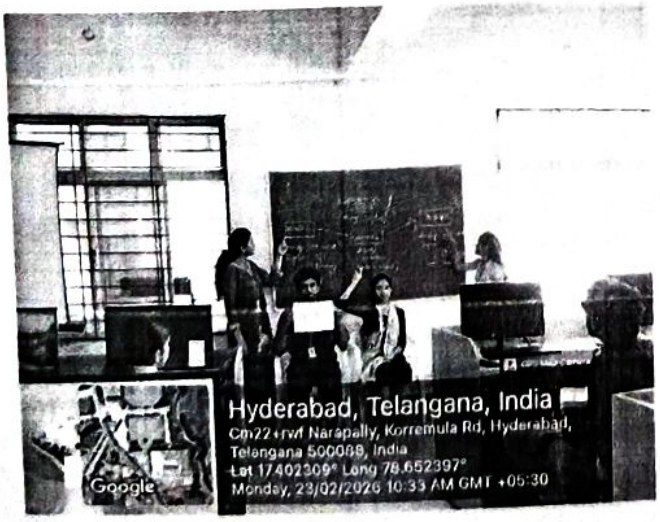
Information Source → Input Transducer → Transmitter → Channel (+ Noise) → Receiver → Output Transducer → Destination

## Enact Summary of role play

1. **Sindhuja** introduced the topic and explained blocks at Sender side with the explanation of the importance of each block.
2. **Shashi** introduced about Noise and told about its impact on the communication
3. **Poojitha** explained about channel and its importance in the transmission of data
4. **Bhagyasree** explained the blocks at receiver and discussed importance of each file.
5. **Guide** concluded by throwing light on the importance of communication system& its working with impact of noise happening while communication.

## Learning & Outcomes from the Activity

1. Conflict / Problem- Due to noise interference, the received message may be slightly altered
2. Through discussion, students conclude:
   - Importance of proper modulation
   - Need for noise reduction techniques
   - Significance of each system component
3. The activity strengthened students' understanding of signal transmission principles and improved their ability to explain, analyze, and apply communication system concepts effectively.
4. Students compared the original and received messages to evaluate system performance and identify communication errors.
5. Students related classroom concepts to real-world systems such as mobile communication, radio broadcasting, and satellite communication.





**Justification of SDG Relevant to the Activity**

SDG 4 – Quality Education

The activity moves beyond traditional lecture methods and encourages hands-on participation. improving conceptual clarity and long-term retention.

Through interactive demonstration, students better understand complex concepts like signal flow. modulation, and noise interference.

Course Instructor(s) Course Coordinator Module Coordinator Program Coordinator HoD