

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
INNOVATIONS IN TEACHING LEARNING PRACTICES

Year/Sem : III & V
Dept of Course handled : ECE
Course Code : EC3501
Course Name : WIRELESS COMMUNICATION

S. No.	Name of the Activity	Details	Mapped COs, POs & PSOs	
			CO	POs & PSOs
1	Interactive Propagation Activity	Mobile Signal Treasure Hunt- Students will explore real-world radio wave propagation by conducting a signal strength hunt in different environments, analyzing path loss, reflection, diffraction, and fading effects in a hands-on way.	CO	CO2
			PO	PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12
			PSO	PSO3
2	Think, Pair & Share Activity	Students will use innovative thinking tools to analyze and propose future advancements in wireless networks using the Think, Pair & Share strategy.	CO	CO5
			PO	PO3, PO4, PO6, PO7, PO8, PO9, PO10, PO11, PO12
			PSO	PSO3

Proof 1



Round 1: Large-Scale Path Loss Test

- Teams move to an **open space** and record mobile signal strength at increasing distances from a **Wi-Fi router/cellular tower**.
- They **plot the path loss** and compare it with the **Free-Space Propagation Model**.



Round 2: Reflection, Diffraction, and Scattering

- Teams test **signal changes near walls, corners, and metal objects**.
- They measure signal strength **before and after obstacles** and classify effects:
 - **Reflection:** High signal near glass/metal surfaces.
 - **Diffraction:** Detectable signal around corners.
 - **Scattering:** Signal disruption near rough surfaces.

Round 3: Small-Scale Faing & Doppler Effect

- One student **walks or runs** while recording signal fluctuations.
- Another student **moves in a car/bike** past a stationary signal source.

THINK PAIR SHARE: _____

DIRECTION: Write your topic on the line above. Then, list the requested information in the areas as indicated.

WHAT I THOUGHT
ABOUT THE TOPIC

WHAT MY PARTNER
THOUGHT ABOUT
THE TOPIC

WHAT WE DECIDED
TO SHARE