

**Shri Sant Gajanan Maharaj College of Engineering Shegaon**  
**Department of Electronics and Telecommunication Engineering**

**Link of Video:** <https://archive.nptel.ac.in/courses/106/105/106105160/>

**Course Title & Course Code:** Wireless Sensor Network (8ETC03)

**Class:** Final Year (4U2)

**Semester:** VIII

**Name of the Course Teacher:** Prof D.L.Bhombe

**Title of the innovative practice:** NPTEL Video

**Objectives/Goals of the practice:**

The primary goal of this innovative teaching practice is:

1. To enhance conceptual understanding about WSN coverage and placement.
2. To use visual animations to illustrate how wireless sensor relates to coverage and understand the relation between the transmission and sensing range.

**Use of Appropriate Methods:**

To achieve the stated goals, the following methods were implemented:

1. Graphical animations are used to understand WSN coverage and placement.
2. Step-by-step understanding of coverage and node placement problem in wireless network
3. Students were provided with the link of NPTEL video
4. Students were informed to check the link before coming to class to enhance understanding.
5. Short quiz was conducted to do an assessment of student understanding

**Significance of Results:**

6. Enhances conceptual clarity and engages visual learners.

**Effective Presentation:**

1. Link was shared with all students
2. Short quiz was conducted to assess student understanding

**Photo of the activity**

## Background (Contd.)

- **Definitions:**
  - Sensing range  $r_s$
  - Transmission range  $r_t$
- **Relationship between coverage and connectivity**
  - If **transmission range**  $\geq 2 * \text{sensing range}$ ,
  - coverage implies connectivity
- Most sensors satisfy the condition!
  - **Coverage** is the main issue

Wireless Ad Hoc and Sensor Networks
CSE, IIT Kharagpur

### PO's & PSO's Mapped:

PO1, PO2, PO3, PO4, PO6, PSO1, PSO2

### Reflective Critique:

The link of NPTEL video was shared with other faculty members.

Mr. H.B.Patil suggested that content of the video more than the content of syllabus

### Evidences of success:

Increased Student Engagement :75% of students have gone through the video and actively participated in the quiz.

### Challenges faced during implementation:

It is hard to keep a track of who watched the video attentively.

Link for peer review : <https://forms.gle/rwNQzjFwwphGExVU7>