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(UGC AUTONOMOUS INSTITUTION)

School of Engineering

Department of Electronics and Communication Engineering

Date: 03rd October, 2026

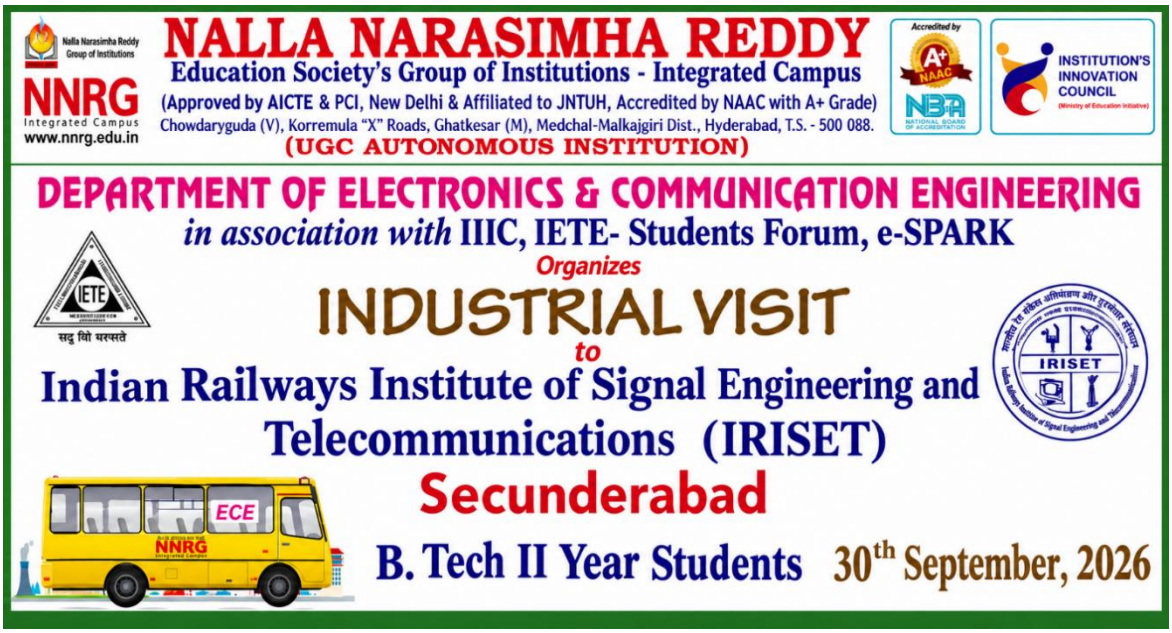
A Report on Industrial Visit

to

Indian Railways Institute for Signal Engineering & Telecommunication (IRISET) – Tarnaka, Secunderabad

Program Particulars:

Date Organized	Venue/Organization	Attendees
30th September 2026 (Wednesday)	Indian Railways Institute for Signal Engineering & Telecommunication (IRISET) – Tarnaka, Secunderabad	B. Tech. ECE selected students (44) & 2 faculty/staff.



Event Banner

Purpose of Visit:

The Department of Electronics and Communication Engineering, in association with the Industry Institute Interaction Cell (IIIC), the Institute of Electrical and Electronics Engineers (IETE) Student Forum (ISF), and e-SPARK organized an industrial visit for the B.Tech II Year ECE students. The visit was conducted on 30th September 2026 (Wednesday) to the, Indian Railways Institute for Signal Engineering & Telecommunication (IRISET) – Tarnaka, Secunderabad .

The 44 students were accompanied by Mr.N Raju, Asst.Prof, Ms.K. Hemalatha, Asst.Prof.,

This visit was aimed at providing students with exposure to practical industry knowledge with railway engineering processes and operations related to their field.



Indoor Signalling Labs

As part of the industrial visit, the students of the Electronics & Communication Engineering department visited key sections related to Railway Signalling and Telecommunication systems. The visit effectively bridged the gap between theoretical concepts and real-world applications.



Kavach Unit Demonstration

During the visit to the Outdoor Signaling Lab (ODS), students gained practical understanding of trackside signaling equipment, interlocking mechanisms, and their role in ensuring safe train movements. The Indoor Telecommunication Lab provided insights into communication networks, control panels, and safety-critical communication systems used in railway operations.

The session on Kavach units and modules was highly informative, where students learned about the indigenous Train Collision Avoidance System, its architecture, functionality, and importance in enhancing railway safety.



Interlocking System

Students observed the relay-based circuits and understood how different relays work together to implement the required interlocking conditions. They also learned how the system provides fail-safe operation for railway signaling.

Students learned that electronic interlocking requires less space and wiring compared with conventional relay interlocking and provides better monitoring, diagnostics and flexibility.



Group Photo

Objectives of the Visit:

1. To understand the basic working of **railway signaling systems**.
2. To learn about **Indoor Signaling Lab (IDS)** and its role in railway signaling.
3. To understand the working of **Relay Interlocking and Electronic Interlocking systems**.
4. To get practical knowledge about **Kavach railway safety systems and its modules**.

Sections Visited:

IRSIET has mainly 3 labs for engineering students visit explanation.

1. Indoor Signaling Lab (IDS)
2. Interlocking Systems (Relay interlocking & Electronic Interlocking)
3. Kavach Units and modules**.**

Outcome:

An individual overview report was collected from the students before the industrial visit to assess their existing knowledge, expectations, and interest in railway signalling and safety systems. After the industrial visit, feedback was collected from every student who attended the visit through a Google Form, and a consolidated feedback report was prepared to evaluate the effectiveness and learning outcomes of the visit.

Overall, the visit helped students gain a practical understanding of Indoor Signalling Systems, Relay Interlocking, Electronic Interlocking, and Kavach technology. It enabled them to understand the real-time application of Electronics and Communication Engineering concepts in railway signalling and safety-critical systems. The industrial exposure enhanced their technical knowledge, practical understanding, awareness of railway safety technologies, and interest in pursuing careers in core engineering and emerging technology domains.

In-Charge
Mr.N Raju(Asst Prof)
Ms.K. Hemalatha(Asst Prof)

Event Co-ordinator
Mr.K.Srinivas
Assistant Professor

HoD-ECE
Dr. B.Ravi
Associate Professor