



**SWARNANDHRA  
COLLEGE OF ENGINEERING & TECHNOLOGY  
(Autonomous)  
SEETHARAMPURAM, NARSAPUR - 534 280, W.G. Dt., A.P.  
AICTE-IDEA Lab**

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**Event no: II**

**Report on Idea to Prototype: Turning Innovative Ideas into Functional Prototypes**

**Event Title:** Idea to Prototype

**Theme:** Turning Innovative Ideas into Functional Prototypes

**Activity:** Idea Presentation with Prototype Development

**Participants:** B. Tech EEE Students

**Organized by:** AICTE-IDEA Lab and Department of Electrical and Electronics Engineering (EEE)

**Date:** 28/02/2025

**Venue:** Innovation Lab (Department of EEE)

**About the event**

On the eve of National Science Day, commemorating the discovery of the Raman Effect by Sir C.V. Raman, the Department of Electrical and Electronics Engineering at Swarnandhra College of Engineering and Technology, in collaboration with AICTE-IDEA Lab, successfully organized the “Idea to Prototype” event on 28th February 2025. This initiative aimed to inspire young engineers by encouraging them to transform theoretical concepts into real-world solutions, in the true spirit of scientific innovation.

**Event Overview**

The event provided a platform for EEE students to present their innovative ideas and develop working prototypes, demonstrating their technical expertise and problem-solving skills. By linking scientific research with engineering applications, the event celebrated National Science Day and emphasized the role of technology in modern innovation.

**Judging Panel**

The event was evaluated by esteemed faculty members:

- Mr. A. Satyanarayana, Head of the Department, EEE
- Dr. V. Madhu, IQAC Coordinator

The judges assessed each project based on innovation, feasibility, technical execution, and presentation skills.



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### **Project Highlights**

EEE students showcased their creativity through various innovative projects. Some of the standout prototypes and simulations included:

- ◆ Nanotechnology in Porcelain Insulators – A novel approach to enhancing the insulation properties of porcelain using nanomaterials, aimed at improving efficiency and durability in outdoor electrical applications.
- ◆ Piezoelectric Sensors for Energy Harvesting – A system utilizing piezoelectric materials to convert mechanical vibrations into electrical energy, offering a sustainable power solution for low-energy applications.
- ◆ Intelligent Dustbin – A smart waste management system featuring automatic lid operation and waste segregation using sensors, promoting hygiene and efficient waste disposal.
- ◆ Simulation Works on MATLAB – Advanced simulations focused on power system optimization, fault analysis, and control system design, demonstrating improvements in electrical network efficiency.

### **Impact and Learning Outcomes**

The event not only provided students with valuable hands-on experience but also instilled a spirit of scientific inquiry and innovation, in line with the legacy of Sir C.V. Raman. The judges appreciated the students' efforts and encouraged them to continue working on research-driven solutions for real-world challenges.

### **Conclusion**

“Idea to Prototype” was a **resounding success**, inspiring students to think beyond conventional learning and engage in **practical innovation**. The event reinforced the importance of research-driven engineering and celebrated the spirit of **National Science Day** by highlighting the **significance of scientific discoveries in technological advancements**. The **Department of EEE** remains committed to fostering future engineers and promoting technological progress through such initiatives.

### **Prepared by:**

Dr. Venkatesh Yepuri

AICTE-IDEA Lab, Coordinator

Department of Electrical and Electronics Engineering

Swarnandhra College of Engineering and Technology

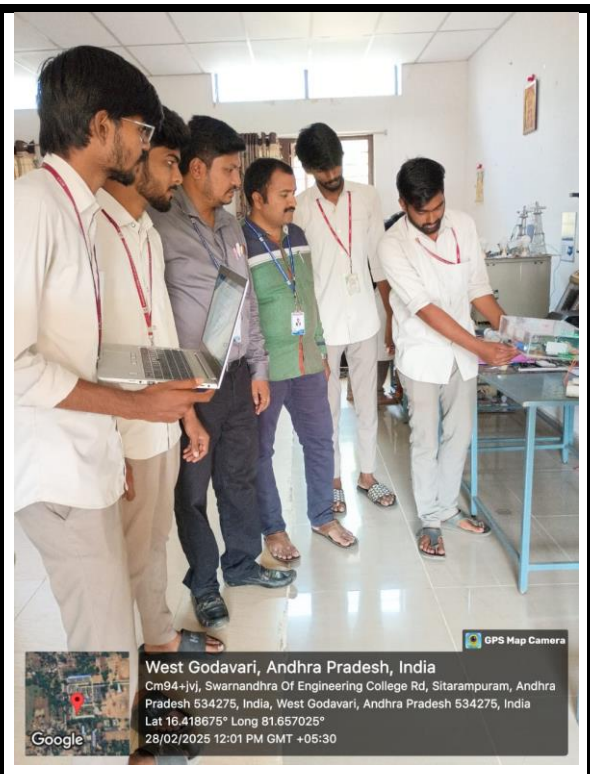
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**Gallery**





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**Fig. 1.** Gallery of the Event Idea to Prototype Organized by AICTE-IDEA Lab and Department of Electrical and Electronics.