**KALLAM HARANADHAREDDY INSTITUTE OF TECHNOLOGY**
**(AUTONOMOUS)**
(Approved by AICTE, New Delhi; Affiliated to JNTUK, Kakinada)
NH-5, Chowdavaram, GUNTUR-522 019
Accredited by NAAC with 'A' grade
PROGRAMS ACCREDITED BY NBA: B.Tech in CE, ME, EEE, ECE & CSE

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Report on Six-Day Skill Development Training Program on "SCADA Training" The Department of **Electrical and Electronics Engineering,** Kallam Haranadhareddy Institute of Technology, Chowdavaram, Guntur, organized a **Six-Day Skill Development Training Program on "**SCADA Training**"** from **2nd January 2023 to 7th January 2023**.

**Organized by:** Department of Electrical and Electronics Engineering (EEE)

**Resource Person:**

**Mr. B. Mahidhar**

**Designation:** Trainer cum Developer, APSSDC, Tadepalli, Guntur.

**Coordinators:**

1. **Dr. P. P. Sharma**
2. **Mr.M.V.N.Murthy**

**Topic: Six-Day Workshop on SCADA Training**

**Venue:** 1G-07

**Date & Duration: 2nd January 2023 to 7th January 2023**. (Six Days)

**Target Audience:** IV.B.Tech Students

**Objectives of the Event:**

- This program Learn the fundamental concepts of Real-time Monitoring
- Provide supervisory-level control over machines and processes.
- Execute automatic or manual control actions from a central location.
- Collect data from field devices (sensors, PLCs, RTUs).
- Store historical data for analysis, reporting, and compliance.
- Generate alarms and notifications for abnormal conditions.
- Help operators respond quickly to prevent failures or hazards.
- Enable operators to control processes from remote or centralized stations.
- Reduce the need for on-site presence in hazardous or remote locations.

**Outcome of the Event:**

Student learning outcomes of the workshop and talks include the ability to:

- Gain knowledge of SCADA architecture, components (RTUs, PLCs, HMIs), and communication protocols.
- Learn how to configure, operate, and monitor SCADA systems.
- Perform real-time monitoring, alarm handling, and data logging.
- Develop practical skills in programming, configuring, and troubleshooting SCADA software.
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- Work with actual or simulated SCADA platforms.
- Understand how SCADA integrates with industrial automation (PLC/DCS systems).
- Apply SCADA for controlling industrial processes in energy, water, oil & gas, and manufacturing.

The schedule of tour and places covered as follows.

| S. No. | Date & Day | Topics |
|---|---|---|
| 1 | 02/01/2023 (Monday) | Fundamentals and Introduction to SCADA<br>Hands-On SCADA Project Development |
| 2 | 03/01/2023 (Tuesday) | SCADA Communication Protocols |
| 3 | 4/01/2023 (Thursday) | Advanced SCADA Concepts |
| 4 | 5/01/2023 (Thursday) | Specialized and Industry-Focused Applications |
| 5 | 6/01/2023 (Friday) | OPC UA and OPC DA standards for modern and legacy SCADA device integration. |
| 6 | 7/01/2023 (Saturday) | Configuring communication between SCADA systems and field devices using these protocols |

**Description / Report on Event:**

Department of Electrical and Electronics Engineering have organized a Six day workshop on "**SCADA Training**" in APSSDC lab (1G07). It was conducted for the students of IV B. Tech of EEE Branch from **2nd January 2023 to 7th January 2023**. A total of 50 students were registered and attended for the event in offline mode. The workshop aimed to design SCADA

boards the students and an important of SCADA in real time applications and The HOD given the detail explanation of department vision and mission to the students.

**Dr. K. Hari Krishna, Head of the Department of EEE** went onto demonstrate the agenda of workshop. He told how students will be benefited from this workshop on their way to becoming an expert in their field and initiated the event with an inspirational speech.

**Mr. B. Mahidhar, Trainer, APSSDC, Vijayawada, Andhra Pradesh, Resource Person** of the event congratulated and appreciated the efforts of the students for conducted workshop in the EEE department of KHIT. He told that workshop of benefits specifically targeted for students in order to fill the void and increase the positive experience for students with a token of appreciation from entire EEE department who graced the event with his presence.

| Course Outcomes | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CO1:** Understand the fundamental concepts of IoT, including architecture, components, and communication protocols. | 2 | - | - | - | 1 | 2 | 2 | - | - | - | - | 2 | 2 | 3 | 2 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CO2:** Develop skills in designing and implementing IoT applications using sensors, microcontrollers, and cloud platforms. | 2 | - | 1 | - | - | 2 | 2 | 2 | 2 | - | - | 2 | 2 | 3 | 2 |
| **CO3:** Enhance problem-solving and teamwork abilities by working on real-time IoT projects and applications. | 2 | - | - | - | - | 2 | - | - | 2 | 3 | - | 2 | 2 | 3 | 2 |
| **AVG** | 2 | | 1 | - | 1 | 2 | 2 | 2 | 2 | 3 | - | 2 | 2 | 3 | 2 |

## CONCLUSION

SCADA training equips learners with the knowledge and practical skills to monitor, control, and optimize industrial processes effectively. It provides hands-on experience in system configuration, data acquisition, alarm handling, and remote operation, ensuring efficiency, safety, and reliability in automation systems. By bridging theoretical concepts with real-world applications, SCADA training prepares participants for industry roles in manufacturing, power, oil & gas, water treatment, and other sectors where automation is essential.