Report on Industrial Visit
to
Amara Raja Skill Development Centre-I&II (ARSDC), Chittoor, Andhra Pradesh

Organised by

Department of Electrical & Electronics Engineering

in Association with IIIC and ISTE Chapter, MITS

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Submitted by: Dr. Balaji Damodhar T S,
Assistant Professor, Dept. of EEE & Assistant Dean-Academics

Participants: B.Tech - III Year EEE Students

Total No. of Participants: 49

Faculties Accompanied: Dr. Sarath Kumar Misra, Mr. Shahenshah Syed, Mrs. Sujatha

Introduction

The Amara Raja Skill Development Centre-I&II (ARSDC) at Petamitta and Diguvamagham, Chittoor, Andhra Pradesh, is an industry-oriented skill development centre established to bridge the gap between academic learning and industrial requirements. The centre focuses on developing technical skills, practical competencies and employability among students and trainees through hands-on and industry-relevant training.

ARSDC provides a range of modern training facilities covering electrical and electronics, industrial automation, mechanical engineering, machining, welding, metrology and computer applications. The centre includes specialized laboratories and workshops such as PLC, Pneumatics & Hydraulics Lab, Electrical & Electronics Labs, Machine Shop, Mechanical Workshop, Metrology Lab, AR Welding Simulator, Computer Lab, Drawing Hall and Smart Classrooms.

The industrial visit provided the III-Year Electrical & Electronics Engineering students of Madanapalle Institute of Technology & Science (MITS) with an opportunity to gain practical exposure to industry-oriented skill development facilities and understand the application of engineering concepts in real-world industrial environments.

Objectives of the Visit

The primary objectives of the industrial visit were:

- To understand the role of industry-oriented skill development in preparing technically competent manpower.
- To gain practical exposure to electrical, electronics and industrial automation facilities.
- To understand the applications of Programmable Logic Controllers (PLC) in industrial automation and control.

- To familiarize students with pneumatic and hydraulic systems used in industrial applications.
- To observe modern machining, welding and metrology facilities.
- To understand the importance of industrial safety, Personal Protective Equipment (PPE) and 5S practices.
- To bridge the gap between theoretical knowledge and practical industrial applications.
- To create awareness among students regarding industry expectations, employability and continuous skill development.

Overview of Amara Raja Skill Development Centre-I&II

The **Amara Raja Skill Development Centre-I&II (ARSDC)** is designed to provide practical and industry-oriented technical training. The centre emphasizes hands-on learning and skill development to prepare trainees for employment and industrial requirements.

The Petamitta centre is equipped with specialized training infrastructure covering multiple engineering disciplines. The facilities include Advanced PLC, Pneumatics & Hydraulics Laboratories, Electrical & Electronics Laboratories, Mechanical Workshop, Machine Shop, Metrology Laboratory, AR Welding Simulator, Computer Laboratory, Drawing Hall, Library and Smart Classrooms.

The training infrastructure provides students with exposure to both conventional and modern industrial technologies. The machine shop includes facilities for machining operations, while advanced manufacturing technologies such as CNC machines and EDM systems provide exposure to modern production practices.

The centre also gives importance to workplace safety and discipline. Students and trainees are exposed to the use of PPE and systematic workplace practices such as **5S**, which are essential for maintaining a safe, clean and productive industrial environment.

Activities Carried Out During the Visit

During the industrial visit, the III Year EEE students were taken through various training facilities at ARSDC. The major activities and areas covered during the visit were as follows:

1. Electrical and Electronics Laboratory

Students visited the electrical and electronics laboratory and were introduced to the laboratory facilities used for practical training. The interaction helped students understand the importance of practical experimentation, measurement, testing and troubleshooting in electrical and electronic systems.

The students were able to relate their academic knowledge with practical training and understand the significance of laboratory-based skill development for engineering professionals.

2. PLC and Industrial Automation

Students were introduced to Programmable Logic Controllers (PLC) and their role in industrial automation. The technical interaction provided an understanding of how PLCs are used for controlling and monitoring industrial processes.

The students gained awareness of automation concepts, control logic and the importance of automation technologies in modern manufacturing and industrial environments.

3. Pneumatics and Hydraulics

The students were exposed to pneumatic and hydraulic training systems and their industrial applications. The demonstration helped students understand how fluid power systems are used for actuation, motion control and automation in industrial machinery.

The visit provided a practical perspective on concepts related to control systems, actuators and industrial equipment.

4. Machine Shop and Mechanical Workshop

Students visited the machine shop and mechanical workshop and observed various machining facilities. They were introduced to conventional machining operations as well as modern manufacturing technologies.

The exposure helped students understand the importance of machining processes, dimensional accuracy, manufacturing practices and equipment maintenance in industrial production.

5. Welding Technology and AR Welding Simulator

The students were introduced to welding technology and the use of modern training methods. The AR Welding Simulator demonstrated how technology can be used to provide controlled and effective practical training in welding operations.

The activity highlighted the importance of simulation-based learning in developing technical skills while maintaining safety during training.

6. Metrology Laboratory

Students were introduced to the role of metrology and precision measurement in manufacturing and quality control. The importance of accurate dimensional measurement and inspection in maintaining product quality was explained.

This exposure helped students appreciate the relationship between manufacturing processes, measurement accuracy and quality assurance.

7. Industrial Safety and 5S Practices

The importance of industrial safety, PPE and workplace discipline was explained during the visit. Students observed the relevance of 5S practices in maintaining an organized, clean and safe working environment.

The visit reinforced the understanding that safety and workplace discipline are integral parts of professional engineering practice**.**

Learning Outcomes of the Visit

The industrial visit enabled students to:

- Understand the importance of practical and industry-oriented technical education.
- Relate theoretical concepts in electrical engineering, electronics and automation to practical applications.
- Gain awareness of PLC-based industrial automation and control systems.
- Understand the working principles and applications of pneumatic and hydraulic systems.
- Familiarize themselves with machining, welding and metrology processes.
- Understand the importance of industrial safety, PPE and 5S practices.
- Gain awareness of modern industrial tools and technologies.
- Understand the importance of technical skill development for employability.
- **Develop awareness of the need for continuous upskilling and lifelong learning.**
- Improve interaction and communication with technical trainers and industry professionals.

Sustainable Development Goal (SDG) Relevance

SDG	SDG Title	Relevance to the Industrial Visit
SDG 4	Quality Education	The visit provided practical, technical and industry-oriented learning beyond conventional classroom education.
SDG 8	Decent Work and Economic Growth	Exposure to skill development and industry-oriented training contributes to employability and workforce development.
SDG 9	Industry, Innovation and Infrastructure	Students gained exposure to PLC, industrial automation, modern laboratories, machining and advanced manufacturing technologies.
SDG 12	Responsible Consumption and Production	Awareness of efficient manufacturing practices, quality control, workplace organization and responsible utilization of resources.
SDG 13	Climate Action	Understanding efficient industrial practices and the role of skilled manpower in supporting sustainable technological development.

PO Mapping for Industrial Visit – ARSDC (New NBA)

Sl. No.	NBA Program Outcome (PO)	Justification / Relevance to Industrial Visit
1	PO1 – Engineering Knowledge	Students applied their knowledge of electrical engineering, electronics, PLC, automation, pneumatics and hydraulics to understand their practical industrial applications.
2	PO2 – Problem Analysis	Exposure to industrial automation, measurement, machining and troubleshooting practices helped students understand the identification and analysis of practical engineering problems.
3	PO3 – Design/Development of Solutions	Students gained awareness of how PLC-based automation, control systems and industrial equipment are used to develop practical solutions for industrial applications.
4	PO5 – Modern Tool Usage	Students were exposed to PLC systems, electrical and electronics equipment, AR welding simulation, CNC and other modern industrial tools and technologies.
5	PO6 – The Engineer and the World	The visit helped students understand the role of engineering technologies in industry, skill development, employability and the wider socio-economic environment.
6	PO8 – Individual and Collaborative Teamwork	Students participated in the industrial visit as a group and engaged in coordinated learning

		activities and technical interactions with faculty and training personnel.
7	PO9 – Communication	Interaction with technical trainers and industry personnel enabled students to understand technical information and communicate their observations and learning.
8	PO11 – Life-Long Learning	The visit created awareness of the need for continuous technical skill development, upskilling and adaptation to emerging industrial technologies.

Glimpses of the visit













Conclusion

The industrial visit to the Amara Raja Skill Development Centre-I&II (ARSDC), on 08.09.2026 was highly informative and provided the III-Year EEE students with valuable exposure to industry-oriented technical training.

The visit enabled the students to observe modern training facilities and understand the practical applications of electrical and electronics systems, PLC-based automation, pneumatics and hydraulics, machining, welding, metrology and industrial safety practices. The exposure helped students establish a meaningful connection between the concepts learned in the classroom and their practical applications in industry.

The interaction with the training facilities and technical personnel also created awareness about the importance of hands-on skills, workplace discipline, safety, teamwork, communication and continuous upskilling. The visit therefore served as an effective platform for enhancing the students' technical knowledge, industrial awareness and employability skills.

Overall, the industrial visit contributed significantly to the professional development of the students and complemented the academic learning process by providing practical exposure to modern industry-oriented technologies and skill development practices.

Acknowledgments

We sincerely thank our **Chancellor, Pro Chancellor, Vice Chancellor, Registrar, Principal, Vice-Principal (Administration), Dean (School of Engineering), and HoD/EEE** for granting permission, providing encouragement, and extending their support for undertaking this insightful industrial visit to the **Amara Raja Skill Development Centre-I&II (ARSDC), Chittoor**.

We also express our heartfelt gratitude to the **management and technical staff of Amara Raja Skill Development Centre-I&II (ARSDC)** for their warm hospitality, cooperation, and valuable technical guidance. Their detailed explanations and practical demonstrations of the various training facilities, laboratories, industrial automation systems, workshops, and safety practices made the industrial visit highly informative, meaningful, and successful.

We further thank all the **faculty members and students** who actively participated and contributed to the successful completion of the industrial visit.



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