

AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNTU GV, Vizianagaram,
Accredited By NAAC and Recognized under 2(f) & 12 (b) by UGC, New
Delhi)

Tamaram, Makavarapalem, Narsipatnam (RD), Anakapalli-531113



*Certificate Course
on*

AUTOMATION AND IOT IN ELECTRICAL SYSTEMS

From 05th Feb 2024 to 10th Feb 2024



ORGANIZED BY

**DEPT. OF ELECTRICAL & ELECTRONICS ENGINEERING
AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY,
TAMARAM (V), MAKAVARAPALEM (M), ANAKAPALLI-531113**

AVANTHI EDUCATIONAL SOCIETY

Avanthi Educational Society under the Leadership of Sri M.Srinivasa Rao garu as chairman was started in the Year 1991. Within a short span of its establishment, the group has made a remarkable stride in the field of education offering various courses at Under Graduate, Post Graduate, Pharmacy & Engineering levels. This milestone is achieved as the institution carved itself to impart quality and career oriented education, countering the challenges of the modern world through planning, dedication, determination, prompt execution and with the innovative ideas of our advisory board. Today, Avanthi Educational Society is proud to have a strength of over 16000 students with 15 institutions under its ambit. It is the path of glory towards the success during the last 25 years. The institution has been adjudged many times as the second best educational institutions in the twin cities and 16th best in all over India through the impartial survey made by the renowned magazine "India Today".

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

AIET started in the year 1999 and offers various courses at Engineering and PG level. The college is providing with rooms, computer centre, laboratories and seminar hall with audio-visual equipments. Industry Institute interaction is conducted regularly to emphasize on the latest trends in the present market.



It is very near to Narsipatnam. Frequent bus facilities are available both from Visakhapatnam and Narsipatnam. Very safe and secure hostel facility is available for

Girl students. These are the additional facilities besides excellent academic atmosphere in the college campus.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

The Department of ELECTRICAL & ELECTRONICS ENGINEERING was established in the year 2001 along with the MECHANICAL, ECE and CSE departments. The department has an intake of 60 students. Commencing the academic year 2011, a post-graduate course in Power Electronics and 2014 in Power Systems was started. The department has full fledged laboratories, workshops and P.G. labs. The department is staffed with qualified, experienced and dedicated members who engage in research activities.. The department with active support from the management is aiming to expand its research activities and industrial consultancies.

ABOUT COURSE

This is a skill oriented course in the study of This six-day workshop is designed to provide students with practical exposure to **Automation** and **Internet of Things (IOT)** technologies in electrical systems. Through expert-led sessions and hands-on activities, participants will learn to integrate these transformative technologies to enhance efficiency and performance in industrial and domestic applications.

CHIEF PATRON

Smt.M.Ganeswari
President, Avanthi Educational Society

PATRON

Dr. C P V N J Mohan Rao
Principal,
Avanthi Institute Of Engineering And Technology

CHAIRMAN

Dr. T Srinivasa Rao
Head of the Department
Electrical & Electronics Engineering

COORDINATORS

Mr P Varahala Dora
Asst. Professor

Mrs S Sujatha Devi
Asst. Professor

TOPICS TO BE COVERED

Day 1: Introduction to Automation and IOT

Day 2: Overview of PLCs (Programmable Logic Controllers) in Automation

Day 3: Understanding SCADA & Introduction to HMIs (Human-Machine Interfaces)

Day 4: IOT Integration in Electrical Systems (IOT Protocols (MQTT, COAP) and Sensors)

Day 5: Advanced Topics in Automation and IOT (Industrial IOT (IIOT) and Industry 4.0)

Day 6: Implementation and testing of automated electrical systems using IoT technologies

For any further information Contact Mr P VARAHALA DORA, Assistant Professor, EEE, and Mr.S SUJATHA DEVI Assistant Professor, EEE



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Dt. 29-01-2024.

CIRCULAR

A Course on **AUTOMATION AND IOT IN ELECTRICAL SYSTEMS** for all the II Year II Semester students of Electrical & Electronics Engineering Department is scheduled from 05th Feb 2024 to 10th Feb 2024. All the students should attend the course without fail. For any further information Contact Smt. S.Sujatha Devi, Assistant Professor, EEE Department may be consulted.

Resource Person: 1.Dr. Ranjan Kumar Behera
Associate Professor
IIT PATNA
2.P.Naresh Babu
Asst Executive Engineer
APGENCO


Dr T Srinivasa Rao
HOD
EEE DEPARTMENT

Copy to: Principal, AIET

Head of the Department
Department of Electrical & Electronics Engg.
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
AUTOMATION AND IOT IN ELECTRICAL SYSTEMS

SYLLABUS

Duration: 05th Feb 2024 to 10th Feb 2024

Day 1: Introduction to Automation and IOT

Day 2: Overview of PLCs (Programmable Logic Controllers) in Automation

Day 3: Understanding SCADA & Introduction to HMIs (Human-Machine Interfaces)

Day 4: IOT Integration in Electrical Systems (IOT Protocols (MQTT, COAP) and Sensors)

Day 5: Advanced Topics in Automation and IOT (Industrial IOT (IIOT) and Industry 4.0)

Day 6: Implementation and testing of automated electrical systems using IoT technologies

S. Sujatha
COORDINATOR

[Signature]
HOD

Head of the Department
Department of Electrical & Electronics Engg.
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
AUTOMATION AND IOT IN ELECTRICAL SYSTEMS

SCHEDULE

Duration: 05th FEB 2024 to 10th FEB 2024

DAY/DATE	Live Session - 1 09.00AM to 12.30 PM	Live Session - 2 1 PM to 4 PM
Monday 05/02/2024	Introduction to Automation in Electrical Systems. Definition and importance Key components: PLC, SCADA, DCS	Basics of IoT & IoT architecture and components Use cases in electrical systems Hands-on Session: Setting up basic IoT devices (e.g., ESP32/Arduino)
Tuesday 06/02/2024	Overview of PLCs (Programmable Logic Controllers) Types, applications, and advantages Writing Basic Ladder Logic. Relay logic and timers	Hands-on Session: Developing a PLC-based control system (e.g., motor control)
Wednesday 07/02/2024	Understanding SCADA Components: RTUs, MTUs, communication protocols	Introduction to HMIs (Human-Machine Interfaces) Role and design principles
Thursday 08/02/2024	IoT Protocols (MQTT, CoAP) and Sensors IoT gateways and cloud platforms (e.g., AWS, Blynk)	Case Studies: IoT-enabled Smart Grids and Energy Monitoring. Hands-on Session: Building an IoT-enabled energy monitoring system
Friday 09/02/2024	Industrial IoT (IIoT) and Industry 4.0 Cybersecurity in IoT systems	AI and Machine Learning in Automation Predictive maintenance use cases. Hands-on Session: Predictive maintenance simulation using IoT data
Saturday 10/02/2024	Implementation and testing of automated electrical systems using IoT technologies	Design and development of automated electrical systems using IoT technologies

S. Sujatha
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

AUTOMATION AND IOT IN ELECTRICAL SYSTEMS

From 05th Feb 2024 to 10th Feb 2024

II Year Students Attendance

S.N	ROLL NO.	NAME OF THE STUDENT	05/02/24	06/02/24	07/02/24	08/02/24	09/02/24	10/02/24
1	22811A0201	AGRAHARAPU NAVYA	✓	✓	✓	✓	✓	✓
2	22811A0202	ALUGU LAVANYA	✓	✓	✓	✓	✓	✓
3	22811A0203	ANTHARVEDI.DURGA SRI VASAVI	✓	✓	✓	✓	✓	✓
4	22811A0204	BHEESETTI SRINUVASU	✓	✓	✓	✓	✓	✓
5	22811A0205	BOBBILI RAMU	✓	✓	✓	✓	✓	✓
6	22811A0206	CHEEPURUPALLI SANTHI VARALAXMI	✓	✓	✓	✓	✓	✓
7	22811A0207	CHIPURUPALLI SUSHMA	✓	✓	✓	✓	X	✓
8	22811A0208	DUBASI DURGA PRASAD	✓	✓	✓	✓	✓	✓
9	22811A0209	GORLE NANDINI	✓	✓	✓	✓	✓	✓
10	22811A0210	JOMMALU DURGAPRASAD	✓	✓	✓	✓	✓	✓
11	22811A0211	KALLA YESUDASU	✓	✓	✓	✓	✓	✓
12	22811A0212	KANNURU MOUNIKA	✓	✓	✓	✓	✓	✓
13	22811A0213	KARRI CHANDRIKA	✓	✓	✓	✓	✓	✓
14	22811A0214	KOLA HARSHITA	✓	✓	✓	✓	✓	✓
15	22811A0216	MARRI VENKATA DURGA KRANTHI	✓	✓	✓	✓	✓	✓

16	22811A0217	N MANOJ KUMAR	✓	✓	✓	✓	✓	✓
17	22811A0219	PALLI TULASI	✓	✓	✓	✓	✓	✓
18	22811A0221	PERURU NIRMALA KUMARI LAKSHMI	✓	✓	✓	✓	✓	✓
19	22811A0222	RAJANA CHAITHANYA KUMAR	✓	✓	✓	✓	✓	✓
20	22811A0223	REDDY AVINASH	✓	✓	✓	✓	✓	✓
21	22811A0226	SEEMUSURU VENKATALAKSHMI	✓	✓	✓	✓	✓	✓
22	22811A0227	SK ABDUL GULAM MUJAHID E MILLAT	✓	✓	✓	✓	✓	✓
23	22811A0228	SURISSETTI THARUN SAI	✓	✓	✓	✓	✓	✓
24	22811A0229	VAKADA. SIMHADRI	✓	✓	✓	✓	✓	✓
25	22811A0230	VANA DIVYA	✓	✓	✓	✓	✓	✓
26	22811A0231	YALAGA LOKESH	✓	✓	✓	✓	✓	✓
27	22811A0232	YELLAPU SARANYA	✓	✓	✓	✓	✓	✓
28	23815A0201	ALLU HARIKA	✓	✓	X	✓	✓	✓
29	23815A0202	BANDARU HARSHA VARDHAN	✓	✓	✓	✓	✓	✓
30	23815A0203	CHETLA KAMESWARI	✓	✓	✓	✓	✓	✓
31	23815A0204	DASARI BHANU PRASAD	✓	✓	✓	✓	✓	✓
32	23815A0205	DONDA VAMSI	✓	✓	✓	✓	✓	✓
33	23815A0206	GOLLORI DINAKAR	✓	✓	✓	✓	✓	✓
34	23815A0207	KAMPATI DURGA PRASAD	✓	✓	✓	✓	✓	✓
35	23815A0208	KOMANAPALLI ANITHA	✓	✓	✓	✓	✓	✓
36	23815A0209	KONATHALA MEENAKSHI	✓	✓	✓	✓	✓	✓
37	23815A0210	MATTAPARTHI LEELA MOUNIKA	✓	✓	✓	✓	✓	✓
38	23815A0211	PARAVADA TARAKA RAM	✓	✓	✓	✓	✓	✓
39	23815A0212	REBAKA KIRAN KUMAR	✓	X	✓	✓	✓	✓
40	23815A0213	REYYA MAHESH	✓	✓	✓	✓	✓	✓

41	23815A0214	SURAVARAPU MUKESH						
42	23815A0215	ALLAVARAPU SANYASI NAIDU	✓	✓	✓	✓	✓	✓
43	23815A0216	BANDI NAGA SATISH KUMAR	✓	✓	✓	✓	✓	✓
44	23815A0217	BODDU PADMAKAR NAIDU	✓	✓	✓	✓	✓	✓
45	23815A0218	CHUTCHUPATLALOKESH	✓	✓	✓	✓	✓	✓
46	23815A0219	DASARI JANESWARA RAO	✓	✓	✓	✓	✓	✓
47	23815A0220	GATREDDI MAHESH	✓	✓	✓	✓	✓	✓
48	23815A0221	GOGADA MOHAN KUMAR	✓	✓	✓	✓	✓	✓
49	23815A0222	GUDE KIRAN	✓	✓	✓	✓	✓	✗
50	23815A0223	KALAGA SIVA PRASAD	✓	✓	✓	✓	✓	✓
51	23815A0224	KARANAM UDAY KUMAR	✓	✓	✓	✓	✓	✓
52	23815A0225	MOLLETI HEMANTH NAGA MAHESH	✓	✓	✓	✓	✓	✓
53	23815A0226	MOSURI RAMUDU	✓	✓	✓	✓	✓	✓
54	23815A0227	RONGALA BHASKAR	✓	✓	✓	✓	✓	✓
55	20811A0210	GUDIVADA VENKATA GANGA VASAVI	✓	✓	✓	✓	✓	✓

S. Sujatha
COORDINATOR

[Signature]
HOD

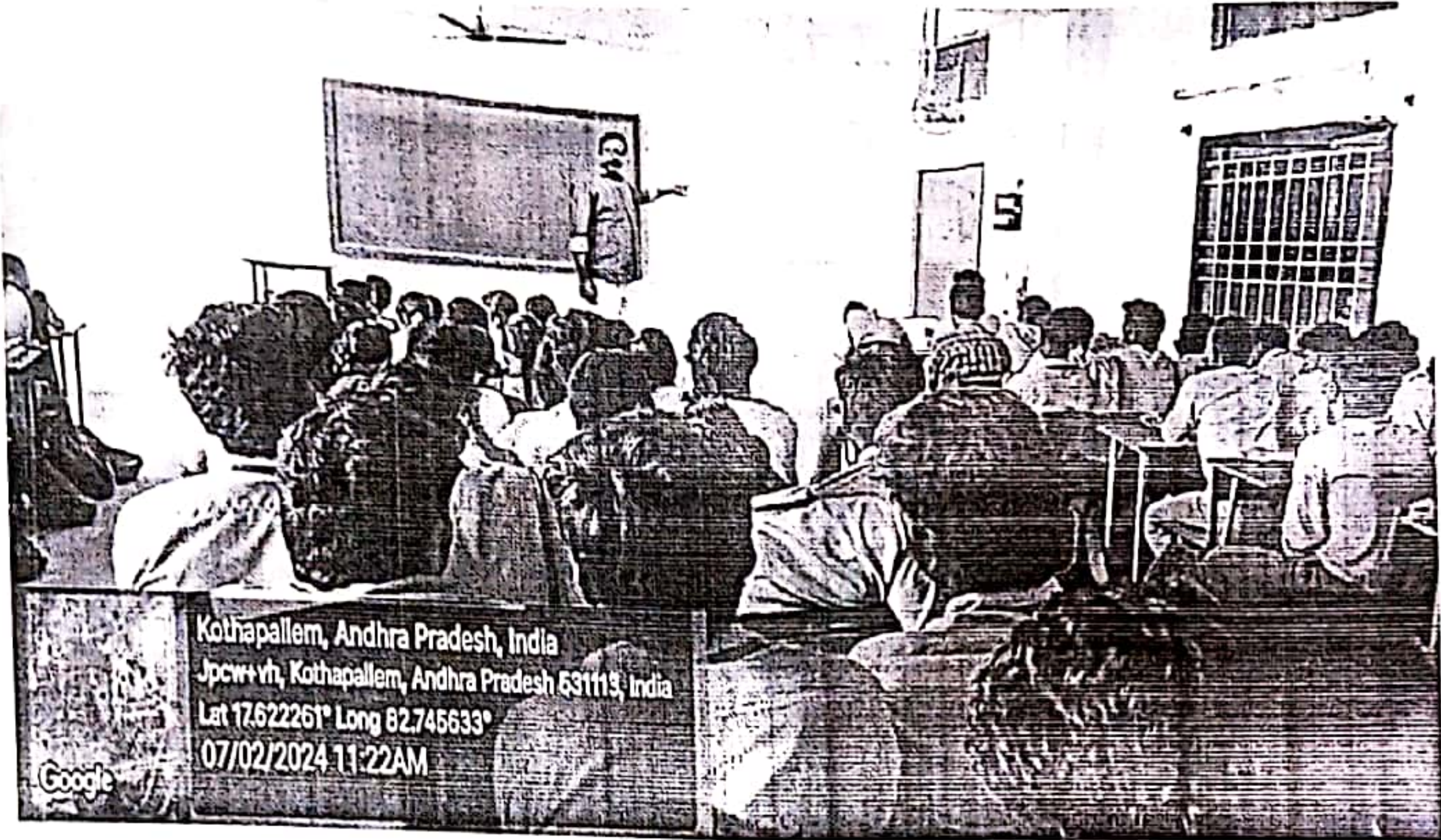
Head of the Department
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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
AUTOMATION AND IOT IN ELECTRICAL SYSTEMS

05th FEB 2024 to 10th FEB 2024



S. Sujatha
COORDINATOR

[Signature]
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Head of the Department
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Certificate of Participation

This is to certify that Mr./Ms. _____ of
_____ has participated in the Certificate Course
entitled on **AUTOMATION AND IOT IN ELECTRICAL SYSTEMS** during from
05th Feb 2024 to 10th Feb 2024 was organised by the Department of **ELECTRICAL
AND ELECTRONICS ENGINEERING** at Avanthi Institute of Engineering and Technology

Coordinator

HOD

Principal



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Dt.12-02-2024

BRIEF REPORT

Department of Electrical & Electronics Engineering, Avanthi Institute of Engineering and Technology had organized a certificate course on "AUTOMATION AND IOT IN ELECTRICAL SYSTEMS" during 05th Feb 2024 to 10th Feb 2024.


The lecture was delivered by two esteemed resource persons. The first speaker, **Dr. Ranjan Kumar Behera, Associate Professor, IIT PATNA**, provided a comprehensive overview of automation in electrical engineering. He explained the significance of industrial automation, its role in increasing efficiency, and its application in real-world electrical systems. He further discussed the evolution of automated control systems and the necessity for students to equip themselves with these skills to meet industry demands.

The second expert, **P. Naresh Babu, Asst Executive Engineer, APGENCO** elaborated on the impact of IoT in electrical networks. He explained how IoT is transforming energy management, smart grids, and remote monitoring of electrical systems. He provided practical examples of how industries are leveraging IoT for optimization and predictive maintenance. The lecture was enriched with live case studies and demonstrations, making the session highly engaging for the students.

The interactive nature of the session allowed students to ask questions and gain deeper insights into the practical applications of automation and IoT. The speakers encouraged students to explore research and career opportunities in these rapidly growing fields.

The lecture concluded with a vote of thanks, appreciating the expert speakers for sharing their valuable knowledge and the active participation of students and faculty members. Overall, the session was a great success, providing students with a strong foundation in automation and IoT technologies in electrical systems.


COORDINATOR


Dr. T Srinivasa Rao
Head of the Department
Electrical & Electronics Engineering

Head of the Department
Department of Electrical & Electronics Engg.
Avanthi Institute of Engg & Tech.
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