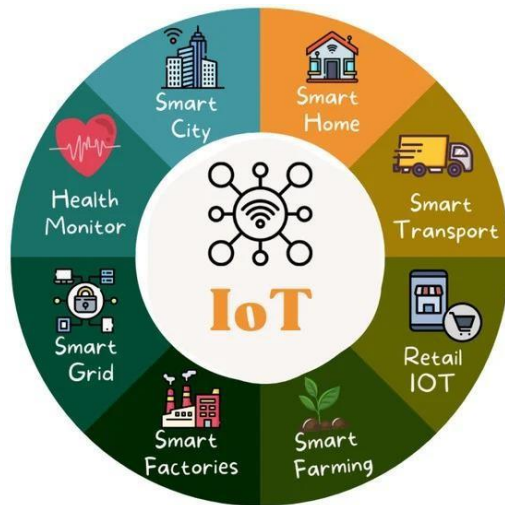




Certificate Course  
ON

## **Introduction to IoT**

*From 5<sup>th</sup> February 2024 to 9<sup>th</sup> February 2024*



**ORGANIZED BY**

**DEPT. OF ELECTRONICS & COMMUNICATION ENGINEERING  
AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY,  
MAKAVARAPALEM (V), VISAKHAPATNAM-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 and to 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 ELECTRONICS AND COMMUNICATION ENGINEERING**

The ECE Department was establishment in the year 1999 with an intake of 60 students and this was increased to 120 students in the 2007 and increased to 180 students in the 2012. The department has an eminent faculty and well supported infrastructure and laboratories the faculty keeps abreast with the latest advances in technology and ensures that hardware equipment and related software are upgraded to ensure its students are able to keep pace with current trends in technology and the industry.

The department also offers a Post – Graduation courses in DECS and VLSI Design. The students are encouraged to participate in workshops, industrial internship, industrial visits and seminars along with the projects assigned during the course, these enable them to broaden their outlook and build in professionalism that makes their transition from college to industry smoother after graduation.

### **CHIEF PATRON**

Sri. M. Srinivasa Rao  
Chairman, Avanthi Educational Society  
Andhra University

### **PATRON**

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

### **CHAIRMAN**

Dr E Govinda  
Head of the Department  
Electronics & Communication Engineering

### **COORDINATOR**

Mr V Raju  
Assistant Professor  
Electronics & Communication Engineering

## **ABOUT WORKSHOP**

An **IoT Workshop** is an interactive, hands-on learning experience where participants can explore and experiment with the concepts, tools, and technologies used in the Internet of Things (IoT). These workshops are designed to provide both theoretical understanding and practical skills for building IoT projects. Whether you are a beginner or have some experience, an IoT workshop can help you understand how to develop, connect, and manage IoT devices.

## **TOPICS TO BE COVERED**

Introduction to IoT, IoT Architecture and Components, IoT Communication Protocols, IoT Devices and Sensors, IoT Data Management and Cloud Integration, Security and Privacy in IoT, Applications of IoT, Future Trends in IoT.

For Registration please contact Mr. V Raju, Assistant Professor, ECE department.



# AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

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

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## CIRCULAR

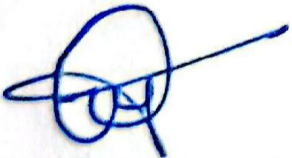
Date: 29 01 2024

This is informed to all the III B.Tech ECE students that our department is planning to conduct five days course on "Introduction to IoT" scheduled on 5<sup>TH</sup> February 2024. It is directed to all the students of II ECE to utilize this opportunity to enhance your technical skills. For more details about registration process and participation contact Course Coordinator Mr. V Raju, Assistant Professor, ECE.

### RESOURCE PERSONS:

Dr. K Raja Sekhar  
Professor  
NSRIT – Visakhapatnam.

Dr P Srnivasu  
Professor  
VIET– Visakhapatnam.



CO-ORDINATOR

Copy to: Principal, AIET



HEAD OF THE DEPARTMENT  
DEPARTMENT OF ECE  
Avanthi Institute of Engg. & Tech.  
Makavarapalem, Visakhapatnam Dist-531 113



# AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

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

A five-day workshop on

## Advancements in Introduction to IoT

5<sup>th</sup> February to 9<sup>th</sup> February 2024

### About this Workshop

An **IoT Workshop** is an interactive, hands-on learning experience where participants can explore and experiment with the concepts, tools, and technologies used in the Internet of Things (IoT). These workshops are designed to provide both theoretical understanding and practical skills for building IoT projects. Whether you are a beginner or have some experience, an IoT workshop can help you understand how to develop, connect, and manage IoT devices.

### Syllabus of the Workshop:

#### Chapter-1

- Introduction to IoT

#### Chapter-2

- IoT Architecture and Components

#### Chapter-3

- IoT Communication Protocols

#### Chapter-4

- IoT Devices and Sensors


#### Chapter-5

- Security and Privacy in IoT, Applications of IoT

### EXPECTED OUTCOMES

- The outcomes of an **IoT workshop** are primarily focused on gaining practical knowledge and skills in designing, developing, and deploying IoT systems.
- Participants will gain a solid understanding of the **core principles of IoT**, including what IoT is, how it works, and its impact on different industries.
- Participants will get hands-on experience programming microcontrollers (e.g., Arduino, Raspberry Pi, ESP32) and making devices interact with sensors and actuators.

  
Coordinator

  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF ECE  
Avanathi Institute of Engg. & Tech.  
Makavarapalem, Visakhapatnam Dist-531 113



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

## Program Schedule

### **Session-1 (05/02/2024)**

9.00 AM to 11.00 AM - What is IoT?, History and Evolution

11.00 AM to 11.15 AM – Tea Break

11.15 AM to 1.15 PM - Types of IoT

1.15 PM to 2.15 PM – Lunch Break

2.15 PM to 4.15 PM - Basic Architecture of IoT Systems

### **Session-2 (06/02/2024)**

9.00 AM to 11.00 AM - Key Components, Wired vs. Wireless Communication

11.00 AM to 11.15 AM – Tea Break

11.15 AM to 1.15 PM - Common IoT Communication Protocols, Challenges in IoT  
Communication

1.15 PM to 2.15 PM – Lunch Break

2.15 PM to 4.15 PM - IoT Devices and Sensors, Introduction to Sensors, IoT Devices

Hands-on Activity: Building a simple IoT device.

### **Session-3 (07/02/2024)**

9.00 AM to 11.00 AM - Security and Privacy in IoT

11.00 AM to 11.15 AM – Tea Break

11.15 AM to 1.15 PM -

1.15 PM to 2.15 PM – Lunch Break

2.15 PM to 4.15 PM –

### **Session-4 (08/02/2024)**

9.00 AM to 11.00 AM – Applications of IoT

11.00 AM to 11.15 AM – Tea Break

11.15 AM to 1.15 PM - Smart Home Systems, Wearables

1.15 PM to 2.15 PM – Lunch Break

2.15 PM to 4.15 PM - Industrial IoT (IIoT), Smart Cities

### **Session-5 (09/02/2024)**

9.00 AM to 11.00 AM - Future Trends in IoT

11.00 AM to 11.15 AM – Tea Break

11.15 AM to 1.15 PM - Edge Computing, AI & IoT, 5G and IoT, Challenges and Opportunities.

1.15 PM to 2.15 PM – Lunch Break

2.15 PM to 4.15 PM - Valediction/Feedback Session.

Coordinator

HOD

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

## DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING


Certificate Course on "Introduction to IoT" from 5<sup>th</sup> February to 9<sup>th</sup> February 2024

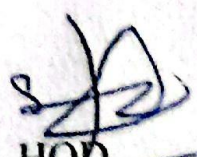
### II BTECH ECE STUDENT ATTENDANCE LIST

S.NO	ROLL NO.	NAME OF THE STUDENT	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb
1	22811A0402	ALA MEGHANA	✓	✓	✓	✗	✗
2	22811A0403	ALLU SAI	✓	✓	✓	✓	✓
3	22811A0404	ALUBOTHU SIVA	✓	✓	✓	✓	✓
4	22811A0405	AMPOLU RAMESH	✓	✓	✗	✓	✓
5	22811A0407	ARTHAMUDI BHAVANISANKAR	✗	✓	✓	✓	✓
6	22811A0408	BAMMIDI ROOPA	✓	✓	✓	✓	✓
7	22811A0409	BANIKULA VAMSI KRISHNA	✓	✓	✓	✓	✓
8	22811A0410	BHEEMAVARAPU DEEPIKA SARANYA	✓	✓	✓	✓	✗
9	22811A0412	CHADARAM JYOTHI SRAVANI	✓	✗	✓	✓	✓
10	22811A0413	CHAGANTI NAGA SOWMYA SRI	✓	✓	✓	✓	✓
11	22811A0414	CHAMANTULA CHARAN	✓	✓	✓	✓	✗
12	22811A0415	DADI HARSHAVARDHAN	✗	✓	✓	✓	✓
13	22811A0416	DARLA PRIYANKA	✗	✓	✓	✓	✓
14	22811A0417	DHULI SYAM JANAKI RAM	✓	✓	✓	✓	✓
15	22811A0418	DOGGA POOJITHA	✓	✓	✗	✓	✓
16	22811A0419	GANDEPALLI SATYA ROHITHA	✓	✓	✓	✓	✓
17	22811A0420	GANDIMANI NISHICA	✓	✓	✓	✓	✓
18	22811A0421	GAVIREDDI POOJITHA	✓	✓	✓	✗	✓
19	22811A0422	GEMBALI AKHIL	✓	✗	✓	✓	✓
20	22811A0423	GOGADA MEENAKSHI	✓	✗	✓	✓	✗
21	22811A0424	GOVALA JYOSHNA	✓	✓	✓	✓	✓
22	22811A0425	IMANDI HARSHA VARDHAN	✓	✓	✓	✗	✓
23	22811A0426	JALUMURI MAHESH	✗	✗	✓	✓	✓
24	22811A0427	JAMMU BHARGAVA	✓	✓	✓	✓	✓
25	22811A0428	TATAPUDI YASWANTH KUMAR	✗	✓	✓	✓	✓
26	22811A0429	KALIMI ARUN KUMAR	✓	✓	✗	✓	✓
27	22811A0430	KALISSETTI CHARAN	✓	✓	✓	✓	✓
28	22811A0431	KALLURU CHIRANJEEVI	✓	✓	✓	✓	✗
29	22811A0432	KANKATALA NUKESH	✗	✓	✓	✓	✓

30	22811A0433	KANTAMREDDI VENKATA JANARDHAN	✓	✓	✓	✗	✓
31	22811A0434	KARRI VEERABABU	✓	✓	✓	✓	✓
32	22811A0435	KATTA SAI GANGADHAR	✓	✓	✓	✓	✓
33	22811A0436	KILLADA YASOD KUMAR	✓	✗	✓	✓	✓
34	22811A0437	KINTADA DHAKSHAYANI	✓	✓	✓	✓	✓
35	22811A0438	KOLLATI DURGA PRASAD	✓	✓	✓	✓	✓
36	22811A0439	KOPPANA MOHINI KUMARI	✓	✓	✓	✓	✓
37	22811A0440	KOTIPALLI BHANUJI DAS	✓	✓	✓	✓	✓
38	22811A0441	MADAGALA DURGA PRASAD	✓	✓	✓	✓	✓
39	22811A0442	MADINI GAYATHRI	✓	✓	✓	✓	✓
40	22811A0443	MAHENDRA KUMAR GURU	✓	✓	✓	✓	✗
41	22811A0444	MAKARAPU PAVAN	✓	✓	✗	✓	✓
42	22811A0445	MAMIDI SATYASRIKANTH	✓	✓	✓	✓	✓
43	22811A0446	MASIMUKKALA CHARAN SAI GANESH	✓	✓	✓	✓	✓
44	22811A0447	MAVURI NAGA POORNA SAI	✗	✓	✓	✓	✓
45	22811A0448	MORTHA SRIKANTH	✓	✓	✓	✓	✓
46	22811A0449	MUPPIREDDY MANJULA DEVI	✓	✓	✓	✓	✗
47	22811A0450	MUSIDIPALLI AKASH	✓	✓	✓	✓	✓
48	22811A0451	NADIGATLA PAVAN SAI	✓	✗	✓	✓	✓
49	22811A0452	NAGAM VENKATA PAVANI	✓	✓	✓	✓	✓
50	22811A0453	NAMMI JASWANTH	✓	✓	✓	✓	✓
51	22811A0454	NYAYAPATY NAGA SAISRI VYSHNAVI	✓	✓	✗	✓	✓
52	22811A0455	PALLI NARAHARI	✓	✓	✓	✓	✓
53	22811A0456	PANCHADARLA GOVINDA	✓	✓	✓	✗	✓
54	22811A0457	PANGA JAYARAM	✓	✓	✓	✓	✓
55	22811A0459	PATHALA ANIL KUMAR	✓	✓	✓	✓	✓
56	22811A0460	PENTAKOTA VARSHINI	✓	✓	✓	✓	✓
57	22811A0462	PINAPATRUNI PHANINDRA	✓	✓	✓	✓	✓
58	22811A0463	POLAVARAPU SWAMY	✓		✓	✓	✓
59	22811A0465	POLUPARTHI DEVI INDUMATI	✗	✓	✓	✓	✓
60	22811A0466	POTHALA SURESH	✓	✓	✓	✓	✓
61	22811A0467	RAAVI VENKATA BALA	✓	✓	✓	✓	✓
62	22811A0468	RUGADA VAMSI	✓	✓	✓	✓	✓
63	22811A0469	SANKARAPU PRAKASH	✓	✗	✓	✓	✓
64	22811A0470	THAGARAMPUDI GOWTHAM	✓	✓	✓	✓	✓
65	22811A0471	THUMMAPALA SHIVAJI	✓	✓	✓	✓	✓
66	22811A0472	VADDI SANGEETHA RAO	✓	✓	✓	✓	✓
67	22811A0473	VALLAMSETTI RESHMA	✓	✓	✓	✗	✓
68	22811A0474	VANGALAPUDI SYAMALA	✓	✓	✓	✓	✓
69	22811A0475	VARRI JYOSHNAVI	✓	✓	✓	✓	✓
70	22811A0476	VEDURUPARTHI SIVARAMA	✓	✓	✗	✓	✗

		CHAITANYA					
71	22811A0477	YELLAPU JYOHINI	✓	✓	✓	✓	✓
72	22811A0478	YERRA HEMANTH	✗	✓	✗	✓	✓
73	22811A0479	KORADA TULASI	✓	✓	✓	✓	✓
74	23815A0401	AKHILA BARIKO	✓	✓	✓	✓	✓
75	23815A0402	ALLU DIVAKAR	✓	✓	✓	✓	✓
76	23815A0403	BANGARU SIVA SAI	✓	✓	✓	✓	✓
77	23815A0404	BODEPU VEDAVYAS NAIDU	✓	✓	✓	✓	✓
78	23815A0405	BOTHSA DILEEP	✓	✓	✓	✓	✓
79	23815A0406	GANDEPALLI HARINADH BHASKAR	✓	✓	✓	✓	✓
80	23815A0407	KALLA PAVANI	✓	✓	✓	✓	✓
81	23815A0408	KAMU MAHESH	✓	✓	✗	✓	✓
82	23815A0409	SURISSETTI JEEVITHA	✓	✓	✓	✓	✓
83	23815A0410	KONADA TRIVENI	✓	✓	✓	✓	✓
84	23815A0411	KUNCHA VINAY	✓	✓	✓	✓	✓
85	23815A0412	MATURU NAVYA SRI	✓	✓	✓	✓	✓
86	23815A0413	MONDEM PAVAN GANESH	✗	✓	✗	✓	✓
87	23815A0414	MONDI VENKATA PUJITHA	✓	✓	✓	✓	✓
88	23815A0415	MYLAPALLI LALITHA	✓	✓	✓	✓	✓
89	23815A0416	NAYANA KARTHIK	✓	✓	✓	✓	✓
90	23815A0417	PAKKURTHI SOWJANYA	✓	✓	✓	✗	✓
91	23815A0418	PANCHADI NOOKA RATNAM	✓	✓	✓	✓	✓
92	23815A0419	SABBAVARAPU HEMAVATHI	✓	✓	✓	✓	✓
93	23815A0420	SOMIREDDI DIVYA	✓	✓	✓	✓	✓
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97	23815A0424	VULLINGALA SAI SUVARNA	✓	✓	✓	✓	✓
98	23815A0425	KILLADA SIVARAMAKRISHNA	✓	✓	✓	✓	✗
99	23815A0426	GUTURI RENUKA	✓	✓	✓	✓	✓
100	23815A0427	KARRI GOWTHAMI	✓	✓	✓	✓	✓
101	23815A0428	KOLLU RAMA MOHAN	✓	✓	✓	✓	✓
102	23815A0429	KORUPROLU NAGA SAI VENKATA DEEPIKA	✓	✓	✓	✓	✓
103	23815A0430	PANCHADA CHANDRAKIRAN	✓	✓	✓	✓	✓

  
Coordinator

  
HOD  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF ECE  
A. Anithi Institute of Engg. & Tech.  
Makavaram, Visakhapatnam Dist.





## AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

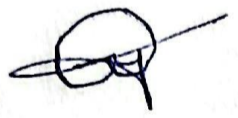
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Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

Department of Electronics & Communication Engineering

Dt: 14 02 2024



  
Coordinator

  
HOD  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF ECE  
Avanthi Institute of Engg. & Tech  
Makavarapalem, Visakhapatnam Dist-531 113



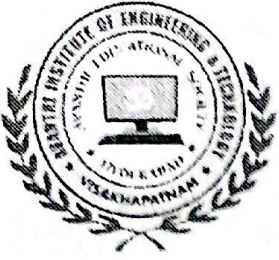
**AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**TAMARAM (V) , MAKAVARAPALEM (M)**  
**VISAKHAPATNAM-531113**

## **CERTIFICATE OF PARTICIPATION**

This is to certify that Mr/Mrs \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_ has  
participated in the Certificate Course entitled on  
"Introduction to IoT" during from 5<sup>th</sup> February 2024 to 9<sup>th</sup>  
February 2024 in Department of Electronics & Communication  
Engineering.

**V Raju**  
Coordinator

**Dr E Govinda**  
Chairman



# AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

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

Department of Electronics & Communication Engineering

Dt: 14 02 2024


## BRIEF REPORT


Department of Electronics & Communication Engineering, Avanathi Institute of Engineering and Technology had organized a certificate course on "Introduction to IoT" during from 5<sup>th</sup> February 2024 to 9<sup>th</sup> February 2024.

Dr. K Raja Sekhar, An **IoT Workshop** is an excellent way to get hands-on experience in building IoT projects and understanding the various components of an IoT system. These workshops offer a blend of theoretical learning and practical application, which is essential for anyone interested in developing IoT solutions. Whether for hobbyists, students, or professionals, an IoT workshop can be a great way to build skills, collaborate with others, and create real-world IoT solutions.

Dr P Srnivasu, The **Internet of Things (IoT)** refers to the interconnection of everyday objects and devices to the internet, allowing them to collect, exchange, and process data autonomously. IoT is transforming the way the world interacts with technology, enabling smarter environments, more efficient operations, and enhanced user experiences across various sectors such as healthcare, agriculture, manufacturing, and transportation.

**IoT** is shaping the future by enabling smarter systems that improve efficiency, convenience, and decision-making. While there are challenges like security and privacy, the potential for innovation in various industries makes IoT a critical technology for the future. As technology evolves, IoT's capabilities will continue to grow, creating more connected and intelligent environments.

  
Coordinator

  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF ECE  
Avanathi Institute of Engg. 7  
Makavarapalem, Visakhapatnam Dist-531 ...