



सत्यमेव जयते

GOVERNMENT OF INDIA

MSME

MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES

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1. ABOUT US

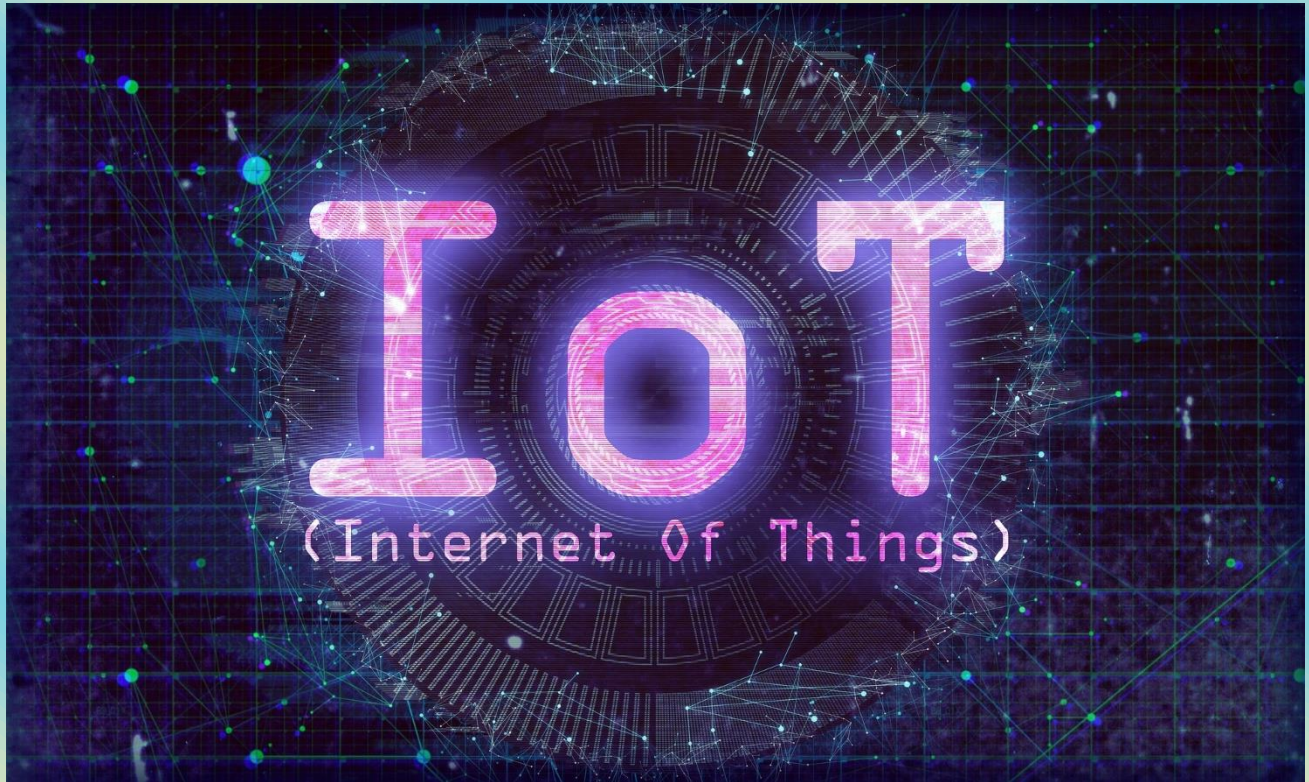


MSME Technology Development Centre (Process & Product Development Centre) is an autonomous body under Ministry of MSME Govt. of India set up at Agra on 21st July, 1986 with core objective of promoting product & process development, delivering high quality training facilities & provides platform to new Startup.

The Centre caters following services at National Level: -

- 1) Training.
- 2) Testing.
- 3) Consultancy.
- 4) Product Development Services.
- 5) Cluster Development –Preparation of DSR/DPR, Setting up of CFC etc.
- 6) CAD/CAM & High End Technical & Management Training.

**BROCHURE
FOR
IoT (Internet of Things)**



ORGANISED BY

ENTREPRENEURSHIP DEVELOPMENT CELL (EDC)
MSME - TECHNOLOGY DEVELOPMENT CENTRE (PPDC)
A Govt. of India Organization,
Ministry of Micro, Small & Medium Enterprises
Foundry Nagar, Agra - 282006 (U.P.)

Become an IoT Certified Professional

COURSE OBJECTIVE

- The Course aims to facilitate the Graduating students, members in industry by:
- Understand the definition and significance of the Internet of Things
- Discuss the architecture, operation, and business benefits of an IoT solution
- Examine the potential business opportunities that IoT can uncover
- Explore the relationship between IoT, cloud computing, and big data
- Identify how IoT differs from traditional data collection systems

BENEFITS

This course gives a foundation in the Internet of Things, including the components, tools, and analysis by teaching the concepts behind the IoT and a look at real-world solutions. IoT has the potential to transform the way consumers and businesses approach the world by leveraging the scope of the IoT beyond connectivity. IoT will improve tracking of assets (equipment, machinery, tools, etc.) using sensors and connectivity, which helps organizations benefit from real-time insights.

WHY SHOULD ONE TAKE IoT CERTIFICATION?

The Internet of Things is spawning the next Industrial Revolution. This program will give you a solid understanding of how to develop and implement your own IoT solutions using sensor connected IoT devices and IoT gateway. Also it will provide you add on to get better opportunity available in field of automation.

WHO SHOULD ATTEND?

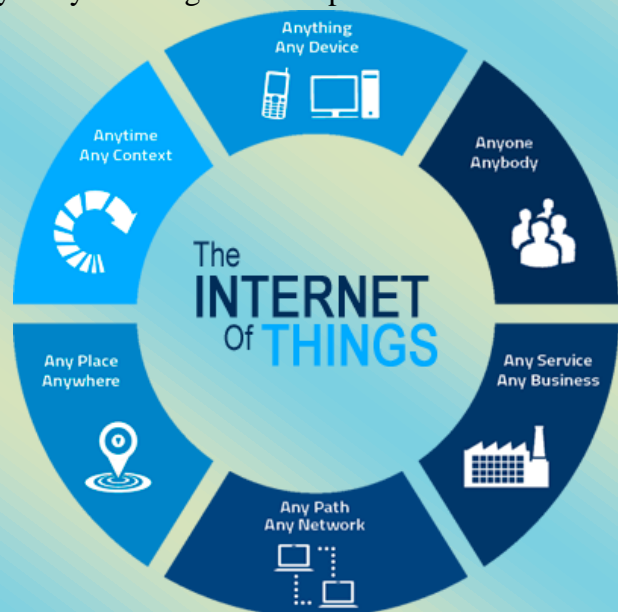
- Graduate science/Engineering Aspirant.
- Individuals/Beginners seeking career opportunity in IoT.
- Professionals who want to learn fundamentals of IoT.
- Businessmen/ Entrepreneurs/Corporate
- NGOs

ABOUT COURSE

The Internet of Things (IoT) is everywhere. It provides advanced data collection, connectivity, and analysis of information collected by computers everywhere—taking the concepts of Machine-to-Machine communication farther than ever before. This course gives a foundation in the Internet of Things, including the components, tools, and analysis by teaching the concepts behind the IoT and a look at real-world solutions.

The following topics will be covered:

- Introduction to IoT(Internet of Things)
- IoT Technologies
- Acquiring Data
- Utilizing Data
- Implementation of IoT
- IoT Analytics
- IoT services and applications
- IoT Radio Frequency Identification



Prerequisite: Persons with minimum Diploma/Degree or pursuing Diploma/Degree can participate

Lab Requirement (OPTIONAL): A laptop or a PC

Length:

All modules of the training detailed above would be taught in a hands-on, application oriented manner using examples, exercises, and case studies. 2 Days training, each day we will have 8 hours of training.

Class Size: 15-20 batch size (Maximum 20)

COURSE COVERAGE

This course will enable you to learn advanced data collection, connectivity, and analysis of information collected by computers everywhere—taking the concepts of Machine-to-Machine communication farther than ever before. This course gives a foundation in the Internet of Things, including the components, tools, and analysis by teaching the concepts behind the IoT and a look at real-world solutions in various fields.

Topics: The training is divided into 2 days. The day wise breakup is as below:

Day 1

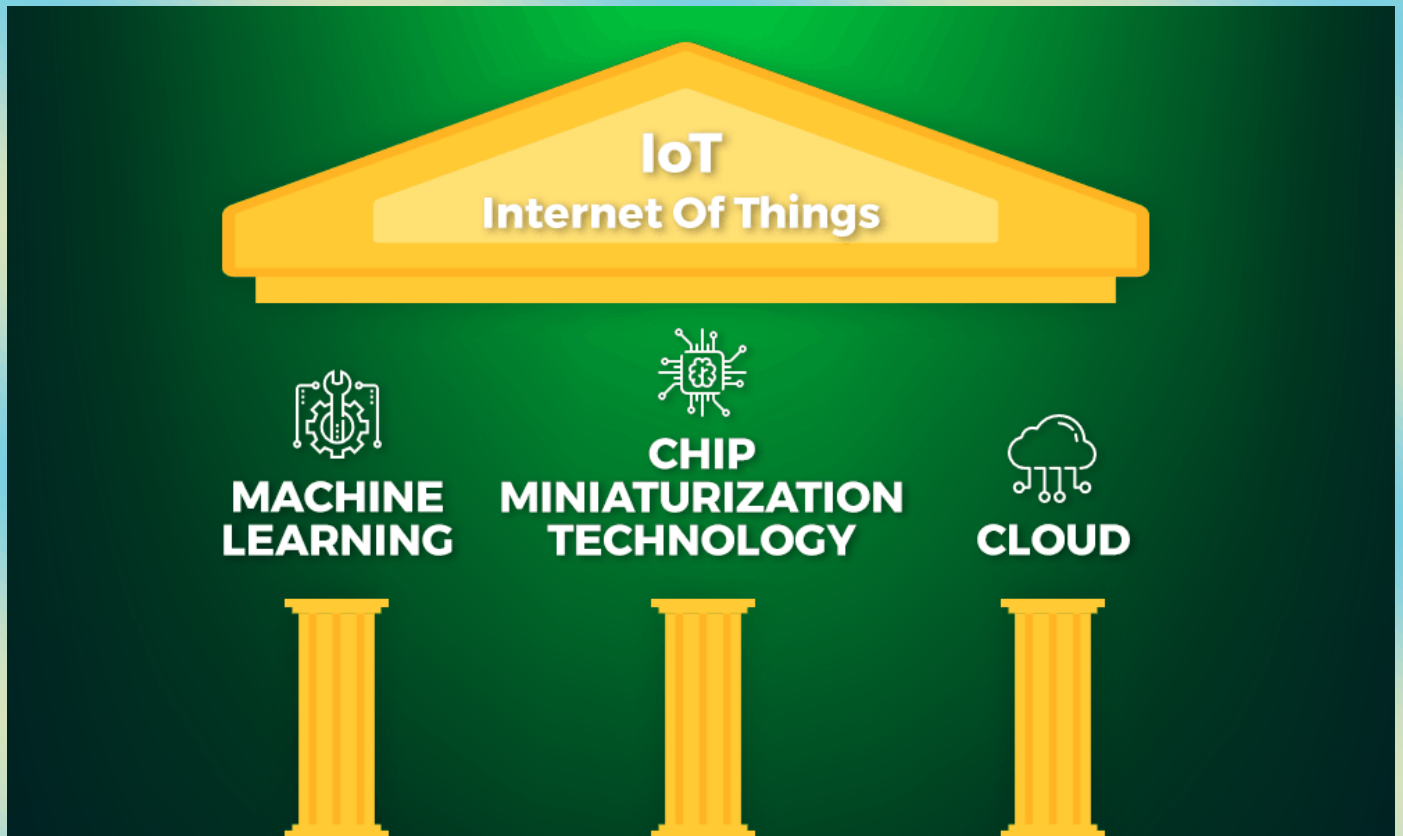
S. No	MODULE	DURATION	TAKE AWAY
1.	Chapter 1 Internet of Things (IoT)	1 Hr	<ul style="list-style-type: none">· What Is the Internet of Things?· Machine to Machine / User-less Communication· Components of an IoT Solution· Open Source and Commercial Examples· Competing Standards for IoT· IoT specialization: Industrial, Medical/Healthcare, Automotive, Energy/Utilities, Financial· Workshop: Brainstorming IoT Utilization
2.	Chapter 2 IoT Technologies	1 Hr	<ul style="list-style-type: none">· IoT Technologies· Bluetooth low energy introduction· Near field communication
3.	Chapter 3 Acquiring Data	2 Hr	<ul style="list-style-type: none">· Traditional Data Storage· Analog and Digital I/O Basics· Sensors and Data Collection Points· Embedded Platforms / Microcontrollers· Software Development· Device Security: Physical and Logical· Connectivity Options· Connecting Sensors to the Cloud· Scaling Number of Sensors· Workshop: IoT Sensor Utilization

4.	Chapter 4 Utilizing Data	1.5 Hr	<ul style="list-style-type: none"> · Collecting and Storage of IoT Sensor Data · Data Aggregation · Processing IoT Data · Privacy and Security · Analysis and Visualization of Data · How the work together: Cloud and IoT · Big Data and IoT · Use Cases for IoT Data · Workshop: IoT Data Collection in the Cloud
5.	Chapter 5 Implementing IoT	1.5 Hr	<ul style="list-style-type: none"> · Embedded Operating Systems · Linux and Windows-Based IoT · Cloud-based Data Collection · On-Going IoT Operations · Workshop: Implementing a Multi-Node IoT Solution

Day 2

S. No	MODULE	DURATION	TAKE AWAY
6.	Chapter 6 IoT Analytics	2 Hr	<ul style="list-style-type: none"> · ETL (Extract-Transform-Load) · Combining IoT Data with Static Data · Scripting and Programming with IoT Data · Machine Learning / Artificial Intelligence · Workshop: IoT Data Analysis in the Cloud
7.	Chapter 7 Bringing It Together	1.5 Hr	<ul style="list-style-type: none"> · IoT Strategies · IoT Governance and Management Strategies · What's Next in IoT · Workshop: Design an IoT Solution

8.	Chapter 8 IoT Services & Applications	2 Hr	<ul style="list-style-type: none"> · IoT Services & Applications Smart cities · Smart health care · Retail & transportation · Participatory sensing · Energy management · Agriculture management · Social networks & IoT
9.	Chapter 9 IoT Radio Frequency Identification	1.5 Hr	<ul style="list-style-type: none"> · IoT Radio Frequency Identification · Overview Of RFID · RFID technology · IoT & RFID tagging



FACULTY

The faculty for this course has vast academic as well as industrial experience. He has served as faculty of Engineering in Department of electronics and communication in esteemed institute .He has Master in Technology in VLSI Design, a branch of Electronics. Currently he is working and leading the research and development (R&D) department of an electronics manufacturing company in field of IoT. The faculty has sound practical knowledge as well as theoretical knowledge in the field.

CERTIFICATE

A Certificate of Ministry of MSME will be awarded to the candidate on successful completion of course and after evaluation examination which will be held on the last day of the Training.

REGISTRATION

The registration will be on first come first served basis. Interested members may register.

MSME-TDC take only limited number candidates and support quality training program and the seats are occupied very quickly so we request you to please register for the program as soon as possible

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