

# CET Internet of Things (IoT) Fundamentals

**Course Duration : 24 Hours**

**Course code : CET-IOTF**

## 1. Course Overview

The CET Internet of Things (IoT) Fundamentals course provides a strong foundation in IoT concepts, architectures, and real-world applications. This course is designed for beginners and professionals who want to understand how connected devices, sensors, and networks work together to collect, transmit, and analyze data. Learners gain practical knowledge of IoT components, communication protocols, security considerations, and industry use cases.

## 2. What you'll learn?

- Core concepts and components of IoT systems
- IoT architecture and communication models
- Sensors, actuators, and embedded devices
- IoT networking and communication protocols
- IoT security, privacy, and data management basics
- Real-world IoT use cases and applications

## 3. Target Audience

- Beginners interested in IoT technology
- IT and engineering professionals exploring IoT
- Developers, system integrators, and analysts
- Business professionals involved in digital transformation
- Students and graduates pursuing IoT careers

## 4. Pre-Requisites

- Basic computer and networking knowledge
- No prior IoT or programming experience required

## 5. Course Content (Modules)

### **Module 1: Introduction to Internet of Things**

- IoT concepts and evolution
- IoT ecosystem and applications

### **Module 2: IoT Architecture and Components**

- Devices, gateways, and platforms
- Edge and cloud computing in IoT

### **Module 3: Sensors, Devices, and Connectivity**

- Sensors and actuators basics
- IoT communication protocols (MQTT, HTTP, CoAP)

### **Module 4: IoT Data Management and Security**

- Data collection and analytics basics
- IoT security challenges and controls

### **Module 5: IoT Use Cases and Industry Applications**

- Smart cities, healthcare, manufacturing, and agriculture
- Governance and regulatory overview