BOOST
THE LEADING TRAINING PROVIDER

Information Technology

Internet of Things (IoT) Masterclass

Course Introduction

The Internet of Things (IoT) stands as a transformative phenomenon in the modern business landscape, weaving connectivity and data into the very fabric of industries. This transformative force brings with it a myriad of crucial implications.

IoT redefines data collection, allowing businesses to gather, connect, and analyze information on an unprecedented scale. It revolutionizes operations by enhancing efficiency through automation and real-time monitoring, while also serving as a catalyst for innovation, enabling the birth of novel business models and creative solutions. By fostering customer-centricity, predictive insights, and informed decision-making, IoT has become an imperative cornerstone for businesses seeking growth, adaptability, and competitive advantage.

In this context, the significance of IoT training becomes paramount. As IoT reshapes industries and business practices, equipping oneself with a robust understanding of its intricacies is not just beneficial, but essential. This training plays a pivotal role in bridging the gap between theoretical knowledge and practical application.

It empowers individuals to comprehend the foundational concepts of IoT, dive into hands-on activities, and explore real-world applications.

By mastering IoT's principles, participants gain a competitive edge, positioning themselves as valuable assets in an environment characterized by technological innovation and change. This training acts as a compass, guiding professionals toward navigating the complex landscape of IoT, contributing to innovation, and embracing the future with confidence and competence.

Target Audience

- Cloud Computing Engineer
- Computer Network Specialist
- Computer Support Specialist
- Database Administrator
- Information Technology Analyst
- Information Technology Leadership

- Information Security Specialist
- Software/Application Developer
- Web Developer
- Technology sales consultant

Learning Objectives

- Gain a comprehensive understanding of the concept and importance of the Internet of Things (IoT).
- Explore the structure, functioning, and business advantages of an IoT solution.
- Analyze the potential business prospects that can be revealed by IoT.
- Learn the correlation connecting IoT, cloud computing, and big data.
- Discover some of the best practices for implementing IoT in the industry.
- Distinguish the distinctions between IoT and conventional data collection systems.

Course Outline

- **Day 01**

  Internet of Things (IoT)

  - What Is the Internet of Things?
  - Machine to Machine / User-less Communication
  - Common Use Cases
  - 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

Acquiring Data

- 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

• **Day 02**

Utilizing Data

- 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

Implementing IoT

- Embedded Operating Systems
- Linux and Windows-Based IoT
- Cloud-based Data Collection
- On-Going IoT Operations
- Workshop: Implementing a Multi-Node IoT Solution

• **Day 03**

Best Practices for IoT Implementation in Industries

- Crafting a clear IoT strategy aligned with organizational goals
- Identifying key performance indicators (KPIs) to measure IoT success
- Scalability and Future-Readiness
- Designing IoT solutions that can scale to accommodate growth
- Addressing potential challenges related to data volume and device proliferation
- Data Management and Analytics
- Integration with Existing Systems
- Security and Privacy
- Regulatory Compliance
- Change Management and Training
- Monitoring and Maintenance
- ROI and Business Value Assessment

• **Day 04**

IoT Analytics

- 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

• **Day 05**

Bringing It Together

- IoT Strategies
- IoT Governance and Management Strategies
- What’s Next in IoT
- Final Activity: Design an IoT Solution

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
June 30, 2025	July 4, 2025	5 days	2150.00 $	Virtual - Online
Sept. 1, 2025	Sept. 5, 2025	5 days	4950.00 $	Austria - Vienna
Dec. 15, 2025	Dec. 19, 2025	5 days	4250.00 $	UAE - Abu Dhabi