

Getting Started with the Internet of Things (IoT)

Modality: Self-Paced Learning

Duration: 12 Hours

SUBSCRIPTION: Learn, Master, Master Plus

About this course:

This course is part of the Microsoft Professional Program Certificate in IoT.

This course provides students with an introduction to IoT and covers the concepts, terms, and patterns of an IoT solution.

The course is divided into modules, each of which builds on what was covered previously. The first module focuses on what an IoT solution is and provides an introduction to the industry verticals that are using IoT to achieve business goals. In the second module, students will learn about the architectural components of an IoT solution, both on the device side and in the cloud. The third module covers the steps and approaches for evaluating and implementing IoT in your business. The final module investigates how real-world IoT solutions are being implemented in various industries and describes some of the different approaches that can be taken.

After completing this course, students will be able to identify and articulate IoT business opportunities across a broad spectrum of industries.

Course Objective:

- Understand what IoT is and the difference between a commercial IoT device and a consumer IoT device
- Explain how IoT can be used to support business needs in industries like Manufacturing, Smart City/Building, Energy, Healthcare, Retail, and Transportation
- Describe the components of an IoT Architecture
- Describe the security considerations that must be addressed when implementing an IoT solution
- Describe the communication, data, and process pathways implemented within an IoT solution
- Explain the approaches that a business can take when preparing to implement an IoT solution
- Describe the device categories available in the marketplace and characteristics of commonly used devices
- Describe software and services that go into an IoT solution and how security considerations are addressed within the implementation
- Evaluate and align a use case scenario or problem statement with a real-world IoT implementation and architecture
- Explain one or more approaches for implementing an IoT solution based on a use case scenario or problem statement

Audience:

- IoT Engineers
- IoT developers

Prerequisite:

- Before starting this course, students should have a basic idea of how cloud computing works and general understanding of what IoT is.

Course Outline:

IoT in Industry

- Examining the Business of IoT
- Exploring IoT Business Scenarios

Introduction IoT Architectures

- Examining the Architecture of an IoT Solution
- Exploring IoT Security Considerations

Approaches an IoT Implementation

- Exploring the Components of an IoT Solution
- Exploring the Approaches IoT Business Solutions

Real-World IoT Scenarios

- Exploring IoT Solutions

Final Evaluation

- Final Assessments