€TRAINING

Internet of Things (IOT)

15 - 19 December 2024
Online

Internet of Things (IOT)

REF: B1409 DATE: 15 - 19 December 2024 Venue: Online - Fee: 2250 Euro

Introduction:

In this Certified Internet of Things IoT Practitioner course, students will learn general strategies for planning, designing, developing, implementing, and maintaining an IoT system through various case studies and by assembling and configuring an IoT device to work in a sensor network. This IoT Practitioner course also prepares students for taking the ANSI accredited CertNexus Certified Internet of Things IoT Practitioner

Course Objectives:

At the end of this course the participants will be able to:

- Plan an IoT implementation.
- Construct and program an IoT device.
- Communicate with an IoT device using wired and wireless connections.
- Process sensor input and control an actuator on an IoT device.
- Manage security, privacy, and safety risks on IoT projects.
- Manage an IoT prototyping and development project throughout the development lifecycle.

Targeted Audience:

IT professionals with baseline skills in computer hardware, software support, and development who want to learn how to design, develop, implement, operate, and manage Internet of Things devices and related systems. The student is interested in learning more about embedded systems, microcontroller programming, IoT security, and the development life cycle for IoT projects. While students will gain hands-on experience assembling a prototype IoT device and using software development tools, these activities are closely guided, so previous experience in electronics assembly and programming is not required. This course prepares students for taking the CertNexus Certified Internet of Things IoT Practitioner Exam ITP-110.

Course Outlines:
Unit 1: Planning an IoT Implementation:

- Select a General Architecture for an IoT Project
- Identify Benefits and Challenges of IoT

Unit 2: Constructing and Programming an IoT Device:

- Select and Configure a Processing Unit
- Select a Microcontroller Power Source
- Use a Software Development Kit to Program an IoT Device

Unit 3: Communicating with an IoT Device:

- Communicate Using Wired Connections
- Communicate Using Wireless Connections
- Communicate Using Internet Protocols

Unit 4: Processing IoT Data:

- Process IoT Device Input and Output
- Process Data in the Cloud
- Provide M2M Communication

Unit 5: Managing Risks on IoT Projects:

- Identify IoT Security and Privacy Risks
- Manage IoT Security and Privacy Risks
- Manage IoT Safety Risks

Unit 6: Undertaking an IoT Project:

- Appendix A: Mapping Course Content to CertNexus Certified Internet of Things Practitioner CIoTP Exam ITP-110
- Identify Real-World Applications for IoT
- Follow the IoT Development Lifecycle