IoT MODULE 01 | Fundamental IoT

Arcitura® CERTIFIED *IoT Architect*

OVERVIEW

This course covers the essentials of the field of Internet of Things (IoT) from both business and technical aspects. Fundamental IoT use cases, concepts, models and technologies are covered in plain English, along with introductory coverage of IoT architecture and IoT messaging with REST, HTTP and CoAp.

The following primary topics are covered:

- Understanding Things, Connectivity, Data, Processing, Commands and Business Analytics
- IoT Business and Technology Drivers, Benefits and Challenges
- Miniaturization and Nanotechnology
- IoT Connectivity and Contextual Realtime Data
- IoT Business Domains (Personal, Home, Enterprise, Utilities, Mobile)
- IoT vs. the Internet
- Resource-Constrained Devices and Low-Power Wide-Area Networks (LPWANs)
- Active and Passive Devices (including RFID)
- Telemetry and Command Data
- Sensors (Mechanical, Resistive, Optical, Ranging, MEMS)
- Microcontrollers, Firmware and Power Sources
- IoT Gateways and Common Gateway Functions
- Introduction to Edge and Fog Computing
- IoT Platforms and Common Platform Functions
- IoT Architecture Layers and Action Modeling
- Key IoT Architecture Design Considerations
- Radio Transports (Leased vs. Unleased, High Band vs. Low Band)
- IoT Messaging with REST, HTTP and the Constrained Application Protocol (CoAp)
- REST Properties and Constrains with IoT and CoAp
- HTTP Resource Identifiers, Media Types and Method with IoT and CoAp
- IoT Publish-and-Subscribe and MQ Telemetry Transport (MQTT)
- Non-Binary Data Serialization for IoT with JSON
- Binary Data Serialization for IoT with Protocol Buffers

Duration: 1 Day

TRAINING + CERTIFICATION

This course is part of a training and accreditation program through which official certification can be achieved and for which official training and certification badges can be issued.

www.arcitura.com/iot

eLEARNING + PRINTED STUDY KITS

This Arcitura study kit includes the contents listed below. These course materials are available in full-color printed format, as well as in eLearning subscription format, via online access and offline file download.

- Workbook (1 of 3)
- Supplement: IoT Neworking
- Supplement: IoT Processing Units
- Exam Preparation Guide (1 of 3)
- Supplement
- Mind Map Poster
- Symbol Legend Poster
- Flashcards
- Audio Tutor Recording

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	Certified DevOps Specialist	Certified Blockchain Architect	Certified IoT Architect	Certified Containerization Architect	Certified Machine Learning Specialist	Certified Artificial Intelligence Specialist
MODULE 01 Fundamental DevOps	●					
MODULE 02 DevOps in Practice	●					
MODULE 03 DevOps Lab	●					
MODULE 01 Fundamental Blockchain		●				
MODULE 02 Blockchain Technology & Architecture		●				
MODULE 03 Blockchain Technology & Architecture Lab		●				
MODULE 01 Fundamental IoT			●			
MODULE 02 IoT Technology & Architecture			●			
MODULE 03 IoT Technology & Architecture Lab			●			
MODULE 01 Fundamental Containerization				●		
MODULE 02 Containerization Technology & Architecture				●		
MODULE 03 Containerization Technology & Architecture Lab				●		
MODULE 01 Fundamental Machine Learning					●	
MODULE 02 Advanced Machine Learning					●	
MODULE 03 Machine Learning Lab					●	
MODULE 01 Fundamental Artificial Intelligence						●
MODULE 02 Advanced Artificial Intelligence						●
MODULE 03 Artificial Intelligence Lab						●