



IoT Security Essentials Program Information

Course Outline



Module 1: IoT Fundamentals

This module will introduce you to the basics of IoT and the different sectors where IoT is established.



Module 2: IoT Networking and Communication

This module will provide insights into the basics of networking concepts, the OSI Model, and the TCP Model. It will also cover the IEEE IoT Standards List.



Module 3: IoT Processors and Operating Systems

This module will help you understand the hardware devices, processors, and operating systems used in IoT.



Module 4: Cloud and IoT

This module will teach you about cloud computing, its characteristics, and the types of cloud services.



Module 5: IoT Advanced Topics

This module will brief you about web communications, mobile applications, and native applications.



Module 6: IoT Threats

This module will introduce you to some of the common IoT attacks, such as Mirai, BrikerBot, Sybii, and Blackhole attacks.



Module 7: Basic Security

This module will discuss the CIA triangle, Wired Equivalent Privacy (WEP), Wi-Fi Protected Access (WPA), and IoT security measures.



Module 8: Cloud Security

This module will discuss the state of cloud security, cloud vulnerabilities, NSA guidance, and secure cloud computing.



Module 9: Threat Intelligence

This module will start with the topic of the National Vulnerability Database, covering US Cert, Shodan, STRIDE, DREAD, PASTA, and CVSS.



Module 10: IoT Incident Response

This module will provide information on incident response in IoT, including standards, processes, procedures, tools, and indicators of compromise.



Module 11: IoT Security Engineering

This module will cover the 12 practices of the Microsoft Secure Development Lifecycle and Threat Modeling.

What Skills Will You Learn

- Gain insights into the emergence of the Internet of Things (IoT).
 - Learn about the devices that make your home a smart home.
 - Dive deep into IoT communication models.
 - Gain a deep understanding of IoT networking and communication.
 - Understand cloud computing in depth.
 - Learn about the different types of threats to IoT.
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Who Is it For

- School students, graduates, professionals, career starters and changers, IT / Technology / Cybersecurity teams with little or no work experience.
- Individuals who want to start a career in cybersecurity and are interested in IoT Security.
- Anyone interested in gaining in-depth knowledge on safeguarding their smart devices or those within their organization.