



IoT Security Technician Skill Zone – CSSIA.ORG

2. Information Communication Technologies

2.3 Computers and Electronics

1. Explain the vulnerabilities related to computers and electronics.
2. Describe the purpose and operation of computer components including the CPU, Memory and Input/output devices.
3. Identify the tools and explain the steps to secure the hardware and peripheral equipment of a system.
4. Describe circuit analysis as related to system security.
5. Describe the use and security vulnerabilities related to the following communication protocols; ZigBee, Modbus, M-Bus, and IEC 62056.

6. Describe the purpose and utilization of the Wireless Sensor Networks (WSN).

Computers and Electronics

Computers and Electronics can be defined as the basic electronic principles including voltage, electrical current, resistance, power, frequency, inductance and capacitance. The IoT security technician must have a working knowledge of these principles and the ability to measure and troubleshoot electronics and electrical circuits. Other critical knowledge and skills would include the understanding of computer circuitry including CPU's, data and address busses, input/output circuitry and memory.

Technicians must also have the ability to calculate power requirements, troubleshoot power supplies and other electronic circuits. Finally, security technicians must understand the vulnerabilities in security controls necessary to protect computer electronics.



Existing Course Cross Reference

Cisco Networking Academy Courses

[IT Essentials](#)

[Introduction to IoT](#)

Cisco Partner Courses

[IoT and ICS Security Controls \(CSSIA.ORG\)](#)

[ICS and SCADA Security \(CSSIA.ORG\)](#)

Non-Cisco Partner Courses

[Internet of Things - Innovation Labs -](#)

[Wylodrin IoT Summer School](#)

[Introduction to the Internet of Things and Embedded Systems - Coursera](#)

Curriculum Resources

Videos

[YouTube.com – Introduction to Breadboarding](#)

[YouTube.com – Breadboarding Part 2](#)

[YouTube.com – Ohms Law](#)

[YouTube.com – Multimeters](#)

[YouTube.com Tutorial 01 for Arduino: Getting Acquainted with Arduino \(15\) Videos](#)

Web Links

[Configuration Management: Best Practices White Paper](#)

[SANS Institute InfoSec Reading Room, Secure Configuration Management Demystified](#)

[NIST Special Publication 800-82 Section 6.2](#)

Textbooks

[Raspberry Pi Networking Cookbook](#)
Chapter 1, 2, 3, 4, 5, 6, 7

[IoT: Building Arduino-Based Projects](#)
Chapter 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Assessment Resources

Labs

None

Quizzes/Exams

[CSSIA CISSP Course](#)

Security Operations – Chapter Exam

Quizlet.com

[Ohms Law Flashcards](#)

[Solving Ohms Law Problems Flashcards](#)

[Breadboarding](#)

[Multimeters](#)

[Connecting an Arduino](#)