

## CompTIA Security+ Certification

Class Length: 5 Days

### Overview

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This course maps to the CompTIA Security+ certification exam and establishes the core knowledge required of any cybersecurity role, as well as providing a springboard to intermediate-level cybersecurity jobs. This course emphasizes both the practical and hands-on ability to identify and address security threats, attacks and vulnerabilities. CompTIA Security+ is a globally trusted, vendor-neutral certification that validates the baseline skills necessary to perform core security functions and pursue an IT security career. CompTIA Security+ is also a DoD Approved 8570 Baseline Certification and this course meets DoD 8140/8570 Training requirements

### Prerequisite Comments

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A+, Network+

### Target Audience

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This course is designed for information technology (IT) professionals who have networking and administrative skills in Windows®-based Transmission Control Protocol/Internet Protocol (TCP/IP) networks; familiarity with other operating systems, such as macOS®, Unix®, or Linux®; and who want to further a career in IT by acquiring foundational knowledge of security topics or using CompTIA Security+ as the foundation for advanced security certifications or career roles. This course is also designed for students who are seeking the CompTIA Security+ certification and who want to prepare for the CompTIA Security+ Certification Exam.

### Course Objectives

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In this course you will:

- Prepare for the CompTIA Security+ exam
- Confidently explain and define an array of security vulnerabilities
- Navigate the complexities of secure system and network design
- Explore the defensive measures like PKI, firewalls and IDS
- Implement robust identity management and access control

### Course Outline

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#### 1 - Comparing Security Roles and Controls

- Topic 1A: Compare and Contrast Information Security Roles
- Topic 1B: Compare and Contrast Security Control and Framework Types

#### 2 - Explaining Threat Actors and Threat Intelligence

- Topic 2A: Explain Threat Actor Types and Attack Vectors

### 3 - Performing Security Assessments

Topic 3A: Assess Organizational Security with Network Reconnaissance Tools  
Topic 3B: Explain Security Concerns with General Vulnerability Types  
Topic 3C: Summarize Vulnerability Scanning Techniques  
Topic 3D: Explain Penetration Testing Concepts

### 4 - Identifying Social Engineering and Malware

Topic 4A: Compare and Contrast Social Engineering Techniques  
Topic 4B: Analyze Indicators of Malware-Based Attacks

### 5 - Summarizing Basic Cryptographic Concepts

Topic 5A: Compare and Contrast Cryptographic Ciphers  
Topic 5B: Summarize Cryptographic Modes of Operation  
Topic 5C: Summarize Cryptographic Use Cases and Weaknesses  
Topic 5D: Summarize Other Cryptographic Technologies

### 6 - Implementing Public Key Infrastructure

Topic 6A: Implement Certificates and Certificate Authorities  
Topic 6B: Implement PKI Management

### 7 - Implementing Authentication Controls

Topic 7A: Summarize Authentication Design Concepts  
Topic 7B: Implement Knowledge-Based Authentication  
Topic 7C: Implement Authentication Technologies  
Topic 7D: Summarize Biometrics Authentication Concepts

### 8 - Implementing Identity and Account Management Controls

Topic 8A: Implement Identity and Account Types  
Topic 8B: Implement Account Policies  
Topic 8C: Implement Authorization Solutions  
Topic 8D: Explain the Importance of Personnel Policies

### 9 - Implementing Secure Network Designs

Topic 9A: Implement Secure Network Designs  
Topic 9B: Implement Secure Switching and Routing  
Topic 9C: Implement Secure Wireless Infrastructure  
Topic 9D: Implement Load Balancers

### 10 - Implementing Network Security Appliances

Topic 10A: Implement Firewalls and Proxy Servers  
Topic 10B: Implement Network Security Monitoring  
Topic 10C: Summarize the Use of SIEM

## 11 - Implementing Secure Network Protocols

Topic 11A: Implement Secure Network Operations Protocols  
Topic 11B: Implement Secure Application Protocols  
Topic 11C: Implement Secure Remote Access Protocols

## 12 - Implementing Host Security Solutions

Topic 12A: Implement Secure Firmware  
Topic 12B: Implement Endpoint Security  
Topic 12C: Explain Embedded System Security Implications

## 13 - Implementing Secure Mobile Solutions

Topic 13A: Implement Mobile Device Management  
Topic 13B: Implement Secure Mobile Device Connections

## 14 - Summarizing Secure Application Concepts

Topic 14A: Analyze Indicators of Application Attacks  
Topic 14B: Analyze Indicators of Web Application Attacks  
Topic 14C: Summarize Secure Coding Practices  
Topic 14D: Implement Secure Script Environments  
Topic 14E: Summarize Deployment and Automation Concepts

## 15 - Implementing Secure Cloud Solutions

Topic 15A: Summarize Secure Cloud and Virtualization Services  
Topic 15B: Apply Cloud Security Solutions  
Topic 15C: Summarize Infrastructure as Code Concepts

## 16 - Explaining Data Privacy and Protection Concepts

Topic 16A: Explain Privacy and Data Sensitivity Concepts  
Topic 16B: Explain Privacy and Data Protection Controls

## 17 - Performing Incident Response

Topic 17A: Summarize Incident Response Procedures  
Topic 17B: Utilize Appropriate Data Sources for Incident Response  
Topic 17C: Apply Mitigation Controls

## 18 - Explaining Digital Forensics

Topic 18A: Explain Key Aspects of Digital Forensics Documentation  
Topic 18B: Explain Key Aspects of Digital Forensics Evidence Acquisition

## 19 - Summarizing Risk Management Concepts

Topic 19A: Explain Risk Management Processes and Concepts

## 20 - Implementing Cybersecurity Resilience

Topic 20A: Implement Redundancy Strategies

Topic 20B: Implement Backup Strategies

Topic 20C: Implement Cybersecurity Resiliency Strategies

## 21 - Explaining Physical Security

Topic 21A: Explain the Importance of Physical Site Security Controls

Topic 21B: Explain the Importance of Physical Host Security Controls

## Related Courses, Certifications, Exams

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- CompTIA Cybersecurity Analyst (CySA+) Certification
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