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Learning Solutions



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## CompTIA Security+® Certification Exam SY0-301

Hours: 40, Tuition: \$1695

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### Course Description

CompTIA Security+® is the primary course you will need to take if your job responsibilities include securing network services, network devices, and network traffic. It is also the main course you will take to prepare for the CompTIA Security+ Certification examination (exam number SY0-301). In this course, you will build on your knowledge and professional experience with computer hardware, operating systems, and networks as you acquire the specific skills required to implement basic security services on any type of computer network.

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### Course Objective:

You will implement and monitor security on networks, applications, and operating systems, and respond to security breaches.

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### Target Student:

This course is targeted toward an Information Technology (IT) professional who has networking and administrative skills in Windows-based TCP/IP networks and familiarity with other operating systems, such as OS X, Unix, or Linux, and who wants to further a career in IT by acquiring a foundational knowledge of security topics; prepare for the CompTIA Security+ Certification examination; or use Security+ as the foundation for advanced security certifications or career roles.

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### Prerequisites:

Basic Windows skills and fundamental understanding of computer and networking concepts are required.

CompTIA A+ and Network+ certifications, or equivalent knowledge, and six to nine months experience in networking, including experience configuring and managing TCP/IP, are strongly recommended.

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### Performance-Based Objectives

Upon successful completion of this course, students will be able to:

- identify fundamental concepts of computer security.
- identify security threats and vulnerabilities.
- examine network security.
- manage application, data and host security.
- identify access control and account management security measures.
- manage certificates.
- identify compliance and operational security measures.
- manage risk.
- develop a BCP and DRP.
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### Course Content

#### Lesson 1: Security Fundamentals

**Topic 1A:** The Information Security Cycle

**Topic 1B:** Information Security Controls

**Topic 1C:** Authentication Methods

**Topic 1D:** Cryptography Fundamentals

**Topic 1E:** Security Policy Fundamentals

## **Lesson 2: Security Threats and Vulnerabilities**

- Topic 2A:** Social Engineering
- Topic 2B:** Physical Threats and Vulnerabilities
- Topic 2C:** Network-Based Threats
- Topic 2D:** Wireless Threats and Vulnerabilities
- Topic 2E:** Software-Based Threats

## **Lesson 3: Network Security**

- Topic 3A:** Network Devices and Technologies
- Topic 3B:** Network Design Elements and Components
- Topic 3C:** Implement Networking Protocols
- Topic 3D:** Apply Network Security Administration Principles
- Topic 3E:** Secure Wireless Traffic

## **Lesson 4: Managing Application, Data, and Host Security**

- Topic 4A:** Establish Device/Host Security
- Topic 4B:** Application Security
- Topic 4C:** Data Security
- Topic 4D:** Mobile Security

## **Lesson 5: Access Control, Authentication, and Account Management**

- Topic 5A:** Access Control and Authentication Services
- Topic 5B:** Implement Account Management Security Controls

## **Lesson 6: Managing Certificates**

- Topic 6A:** Install a CA Hierarchy
- Topic 6B:** Enroll Certificates
- Topic 6C:** Secure Network Traffic by Using Certificates
- Topic 6D:** Renew Certificates
- Topic 6E:** Revoke Certificates
- Topic 6F:** Back Up and Restore Certificates and Private Keys

## **Lesson 7: Compliance and Operational Security**

- Topic 7A:** Physical Security
- Topic 7B:** Legal Compliance
- Topic 7C:** Security Awareness and Training

## **Lesson 8: Risk Management**

- Topic 8A:** Risk Analysis
- Topic 8B:** Implement Vulnerability Assessment Tools and Techniques
- Topic 8C:** Scan for Vulnerabilities
- Topic 8D:** Mitigation and Deterrent Techniques

## **Lesson 9: Managing Security Incidents**

- Topic 9A:** Respond to Security Incidents
- Topic 9B:** Recover from a Security Incident

## **Lesson 10: Business Continuity and Disaster Recovery Planning**

- Topic 10A:** Business Continuity
- Topic 10B:** Plan for Disaster Recovery
- Topic 10C:** Execute DRPs and Procedures

## **Appendix A: Mapping Course Content to the CompTIA® Security+® (Exam SY0-301) Objectives**