

CASP+ Syllabus

CASP+

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Course Description and Goals

Course Description: Are you an IT manager who wants to learn more about cyber security management for your organization? This course will prepare you to do just that, as well as to take and pass the CompTIA CASP+ certification. CompTIA's CASP+ exam tests your knowledge of how to create and integrate secure solutions in various types of environments with the goal of achieving a secure, resilient enterprise while managing risk and various compliance requirements.

The course is designed around the 4 domains that CompTIA outlined for the CASP+ certification. These are:

- Security Architecture: Topics in this domain include -
 - securely deploying and configuring various services to increase security
 - network segmentation
 - zero trust concepts
 - software-defined networks
- Security Operations: Topics in this domain include -
 - learning how to identify threats for your organization
 - find and remediate indicators of compromise
 - perform a vulnerability assessment
 - managing vulnerabilities discovered within your organization
- Security Engineering and Cryptography: Topics in this domain include -

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- Managing configurations across your network for all devices
- creating deployment methods to ensure that all devices are properly managed
- managing endpoint security
- sector-specific threats
- how cloud services can impact the security posture of an organization and how to manage it
- how to properly deploy PKI and other encryption systems based on organizational requirements
- Governance, Risk, and Compliance: Topics in this domain include -
 - performing risk assessments,
 - managing risks
 - the risk management lifecycle
 - managing and mitigating risk for the organization
 - compliance frameworks and their impact on organization risk management
 - business continuity
 - disaster recovery concepts

Target Audience: The CASP+ is targeted for those in senior cyber security or IT management roles. It is not designed as an entry-level certification. Example work roles include security architect, senior security engineer, SOC manager, and security analyst. While the exam is very technical, the course also covers many concepts of security management.

The CASP+ is approved for the U.S. Department of Defense Directive 8140/8570.01-M in technical and management tracks.

Course Level: The CASP+ course is an advanced-level course. CompTIA states that the CASP+ certification is equivalent to 10 years of hands-on experience with 5 of those years in security. The certification is aimed at those who want to show mastery of cyber security concepts.

Prerequisites: While CompTIA doesn't have any prerequisites for the exam, it is recommended for those with at least 5 years of hands-on computer security experience. To get the most out of this course, previous understanding of networking, TCP/IP, cyber security concepts, subnetting, firewalls, and other related topics is recommended.

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Supplementary Materials:

Course Goals: By the end of this course, learners should be able to:

- Design secure network architectures
- Utilize vendor-neutral technology to secure new or existing networks
- Analyze the requirements of your organization to determine the best design to secure your infrastructure
- Integrate your organization's software products in a secure way
- Create and manage a data security program using tools such as data loss prevention.
- Determine your organization's security needs to create strong authentication controls
- Implement virtualization and cloud computing services securely for your organization
- Understand how to implement public key infrastructure (PKI)
- Utilize threat intelligence in your organization to manage threats
- Differentiate the different threat actor types, their unique motivations and how each impacts your threat management
- Analyze indicators of compromise to create an incident response methodology
- Create a vulnerability management process for your organization
- Perform vulnerability assessments using a variety of tools to identify vulnerabilities
- Secure your organization's mobile devices
- Create and implement the proper endpoint security controls based on your threat model
- Understand how specific sectors have unique security considerations
- Determine if cloud technologies are appropriate for your organization and how they would impact your security posture
- Choose the appropriate type of encryption based on your business requirements
- Create risk strategies based on your organization's requirements
- Manage and mitigate vendor risk in your organization
- Understand compliance frameworks and how they may impact your organization
- Create an appropriate disaster recovery model based on organizational requirements
- Establish a level of business continuity that fits organizational needs and compliance requirements

Labs Used: N/A

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Course Outline

Module 1 | CASP+ Exam and Certification

- Lesson 1.1: Introduce myself
- Lesson 1.2: CASP+ Overview
- Lesson 1.3: Course Overview

Module 2 | Security Architecture

- Lesson 2.1: Network Security Architecture Part 1
- Lesson 2.2: Network Security Architecture Part 2
- Lesson 2.3: Secure Infrastructure Design
- Lesson 2.4: Integrating Software Applications Part 1
- Lesson 2.5: Integrating Software Applications Part 2
- Lesson 2.6: Software Development Activities
- Lesson 2.7: Data Security and the Data Life Cycle
- Lesson 2.8: Authentication
- Lesson 2.9: Authorization Controls
- Lesson 2.10: Virtualization and Cloud Technology
- Lesson 2.11: Emerging Technologies

Module 3 | Security Operations

- Lesson 3.1: Threat Management
- Lesson 3.2: Threat Management Frameworks
- Lesson 3.3: Indicators of Compromise
- Lesson 3.4: Vulnerability management
- Lesson 3.5: Vulnerability Assessments
- Lesson 3.6: Vulnerability Risk Mitigation Part 1
- Lesson 3.7: Vulnerability Risk Mitigation Part 2
- Lesson 3.8: Techniques for Risk Reduction
- Lesson 3.9: Incident Response
- Lesson 3.10: Forensics Concepts
- Lesson 3.11: Forensics Tools

Module 4 | Security Engineering and Cryptography

- Lesson 4.1: Enterprise Mobility Security Part 1

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Lesson 4.2: Enterprise Mobility Security Part 2
Lesson 4.3: Endpoint Security - Hardening Part 1
Lesson 4.4: Endpoint Security - Hardening Part 2
Lesson 4.5: Sector-Specific Technology Security Concerns
Lesson 4.6: ICS Protocols
Lesson 4.7: Security Implications of Cloud Technology Adoption
Lesson 4.8: Cryptography
Lesson 4.9: Implementing Public Key Infrastructure
Lesson 4.10: Implementing PKI Solutions
Lesson 4.11: Common Certificate Implementation Issues

Module 5 | Governance, Risk, and Compliance

Lesson 5.1: Understanding Risk
Lesson 5.2: The Risk Life Cycle
Lesson 5.3: Vendor Risk
Lesson 5.4: Governance and Compliance Part 1
Lesson 5.5: Governance and Compliance Part 2
Lesson 5.6: Business Impact Analysis
Lesson 5.7: Disaster Recovery Plans

Module 6 | Preparing for Your Exam

Lesson 6.1: Course Recap
Lesson 6.2: Study Strategies
Lesson 6.3: Exam Time! Strategies for Success

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