



Course Outline	CertMaster Learn	Student Guide eBook	CertMaster Labs
<p>Overview</p>	<p>Each of the bulleted activities below is a separate study task within the CertMaster Learn learning plan. Students are encouraged to complete a certain number of tasks in each login session based on their desired course completion date.</p>	<p>Review Activities are embedded within the eBook. Videos and Practice Questions are found in the CompTIA Learning Center, the platform through which the eBook is delivered.</p>	<p>Labs are available at the course level or integrated as study tasks within CertMaster Learn.</p>
<p>Lesson 1: Comparing Security Roles and Controls</p>			
<p>Topic 1A: Compare and Contrast Information Security Roles</p>	<ul style="list-style-type: none"> • Video: Information Security Roles • Review Activity: Information Security Roles 	<ul style="list-style-type: none"> • Video: Information Security Roles • Review Activity: Information Security Roles 	
<p>Topic 1B: Compare and Contrast Security Control and Framework Types</p> <p><i>Exam objectives covered:</i> 5.1 Compare and contrast various types of controls 5.2 Explain the importance of applicable regulations, standards, or frameworks that impact organizational security posture</p>	<ul style="list-style-type: none"> • Video: Security Control Types • Review Activity: Security Control and Framework Types • PBQ: Compare and Contrast Security Control and Framework Types 	<ul style="list-style-type: none"> • Video: Security Control Types • Review Activity: Security Control and Framework Types 	
	<ul style="list-style-type: none"> • Lesson 1: Practice Questions 	<ul style="list-style-type: none"> • Lesson 1: Practice Questions 	
<p>Lesson 2: Explaining Threat Actors and Threat Intelligence</p>			
<p>Topic 2A: Explain Threat Actor Types and Attack Vectors</p> <p><i>Exam objectives covered:</i> 1.5 Explain different threat actors, vectors, and intelligence sources</p>	<ul style="list-style-type: none"> • Review Activity: Threat Actor Types and Attack Vectors 	<ul style="list-style-type: none"> • Review Activity: Threat Actor Types and Attack Vectors 	
<p>Topic 2B: Explain Threat Intelligence Sources</p> <p><i>Exam objectives covered:</i> 1.5 Explain different threat actors, vectors, and intelligence sources</p>	<ul style="list-style-type: none"> • Video: Investigating Threat Data and Intelligence Sources • Review Activity: Threat Intelligence Sources 	<ul style="list-style-type: none"> • Video: Investigating Threat Data and Intelligence Sources • Review Activity: Threat Intelligence Sources 	
	<ul style="list-style-type: none"> • Lesson 2: Practice Questions 	<ul style="list-style-type: none"> • Lesson 2: Practice Questions 	
<p>Lesson 3: Performing Security Assessments</p>			

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<p>Topic 3A: Assess Organizational Security with Network Reconnaissance Tools</p> <p><i>Exam objectives covered:</i> 4.1 Given a scenario, use the appropriate tool to assess organizational security</p>	<ul style="list-style-type: none"> • Video: The Kill Chain • Video: Network Topology Discovery Using Software Tools • Video: Host Fingerprinting Using Software Tools • Video: Analyzing Packets • Review Activity: Organizational Security with Network Reconnaissance Tools • PBQ: Assess Organizational Security with Network Reconnaissance Tools 	<ul style="list-style-type: none"> • Video: The Kill Chain • Video: Network Topology Discovery Using Software Tools • Video: Host Fingerprinting Using Software Tools • Video: Analyzing Packets • Review Activity: Organizational Security with Network Reconnaissance Tools 	<ul style="list-style-type: none"> • Assisted Lab: Exploring the Lab Environment • Assisted Lab: Scanning and Identifying Network Nodes • Assisted Lab: Intercepting and Interpreting Network Traffic with Packet Sniffing Tools
<p>Topic 3B: Explain Security Concerns with General Vulnerability Types</p> <p><i>Exam objectives covered:</i> 1.6 Explain the security concerns associated with various types of vulnerabilities</p>	<ul style="list-style-type: none"> • Review Activity: Security Concerns with General Vulnerability Types 	<ul style="list-style-type: none"> • Review Activity: Security Concerns with General Vulnerability Types 	
<p>Topic 3C: Summarize Vulnerability Scanning Techniques</p> <p><i>Exam objectives covered:</i> 1.7 Summarize the techniques used in security assessments</p>	<ul style="list-style-type: none"> • Video: Configuring Vulnerability Scanners • Review Activity: Vulnerability Scanning Techniques 	<ul style="list-style-type: none"> • Video: Configuring Vulnerability Scanners • Review Activity: Vulnerability Scanning Techniques 	<ul style="list-style-type: none"> • Assisted Lab: Analyzing the Results of a Credentialed Vulnerability Scan
<p>Topic 3D: Explain Penetration Testing Concepts</p> <p><i>Exam objectives covered:</i> 1.8 Explain the techniques used in penetration testing</p>	<ul style="list-style-type: none"> • Video: Implementing Penetration Testing • Review Activity: Penetration Testing Concepts 	<ul style="list-style-type: none"> • Video: Implementing Penetration Testing • Review Activity: Penetration Testing Concepts 	
	<ul style="list-style-type: none"> • Lesson 3: Practice Questions 	<ul style="list-style-type: none"> • Lesson 3: Practice Questions 	
Lesson 4: Identifying Social Engineering and Malware			
<p>Topic 4A: Compare and Contrast Social Engineering Techniques</p> <p><i>Exam objectives covered:</i> 1.1 Compare and contrast different types of social engineering techniques</p>	<ul style="list-style-type: none"> • Video: Social Engineering Attack Troubleshooting • Review Activity: Social Engineering Techniques • PBQ: Compare and Contrast Social Engineering Techniques 	<ul style="list-style-type: none"> • Video: Social Engineering Attack Troubleshooting • Review Activity: Social Engineering Techniques 	
<p>Topic 4B: Analyze Indicators of Malware-Based Attacks</p>	<ul style="list-style-type: none"> • Video: Determining Malware Types 	<ul style="list-style-type: none"> • Video: Determining Malware Types 	<ul style="list-style-type: none"> • Assisted Lab: Installing, Using, and

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<p><i>Exam objectives covered:</i> 1.2 Given a scenario, analyze potential indicators to determine the type of attack 4.1 Given a scenario, use the appropriate tool to assess organizational security (Cuckoo only)</p>	<ul style="list-style-type: none"> Review Activity: Indicators of Malware-Based Attacks PBQ: Analyze Indicators of Malware-Based Attacks 	<ul style="list-style-type: none"> Review Activity: Indicators of Malware-Based Attacks 	Blocking a Malware-based Backdoor
	<ul style="list-style-type: none"> Lesson 4: Practice Questions 	<ul style="list-style-type: none"> Lesson 4: Practice Questions 	<ul style="list-style-type: none"> APPLIED LAB: Performing Network Reconnaissance and Vulnerability Scanning
Lesson 5: Summarizing Basic Cryptographic Concepts			
<p>Topic 5A: Compare and Contrast Cryptographic Ciphers</p> <p><i>Exam objectives covered:</i> 2.1 Explain the importance of security concepts in an enterprise environment (hashing only) 2.8 Summarize the basics of cryptographic concepts</p>	<ul style="list-style-type: none"> Video: Hashing Algorithms Video: Identifying Symmetric Cryptographic Algorithms Video: Identifying Asymmetric Cryptographic Algorithms Review Activity: Cryptographic Ciphers 	<ul style="list-style-type: none"> Video: Hashing Algorithms Video: Identifying Symmetric Cryptographic Algorithms Video: Identifying Asymmetric Cryptographic Algorithms Review Activity: Cryptographic Ciphers 	
<p>Topic 5B: Summarize Cryptographic Modes of Operation</p> <p><i>Exam objectives covered:</i> 2.1 Explain the importance of security concepts in an enterprise environment (hashing only) 2.8 Summarize the basics of cryptographic concepts</p>	<ul style="list-style-type: none"> Review Activity: Cryptographic Modes of Operation PBQ: Summarize Cryptographic Modes of Operation 	<ul style="list-style-type: none"> Review Activity: Cryptographic Modes of Operation 	
<p>Topic 5C: Summarize Cryptographic Use Cases and Weaknesses</p> <p><i>Exam objectives covered:</i> 1.2 Given a scenario, analyze potential indicators to determine the type of attack 2.8 Summarize the basics of cryptographic concepts</p>	<ul style="list-style-type: none"> Review Activity: Cryptographic Use Cases and Weaknesses 	<ul style="list-style-type: none"> Review Activity: Cryptographic Use Cases and Weaknesses 	

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<p>Topic 5D: Summarize Other Cryptographic Technologies</p> <p><i>Exam objectives covered:</i> 2.8 Summarize the basics of cryptographic concepts</p>	<ul style="list-style-type: none"> Review Activity: Other Cryptographic Technologies 	<ul style="list-style-type: none"> Review Activity: Other Cryptographic Technologies 	
	<ul style="list-style-type: none"> Lesson 5: Practice Questions 	<ul style="list-style-type: none"> Lesson 5: Practice Questions 	
Lesson 6: Implementing Public Key Infrastructure			
<p>Topic 6A: Implement Certificates and Certificate Authorities</p> <p><i>Exam objectives covered:</i> 3.9 Given a scenario, implement public key infrastructure</p>	<ul style="list-style-type: none"> Review Activity: Certificates and Certificate Authorities PBQ: Implement Certificates and Certificate Authorities 	<ul style="list-style-type: none"> Review Activity: Certificates and Certificate Authorities 	<ul style="list-style-type: none"> Assisted Lab: Managing the Lifecycle of a Certificate
<p>Topic 6B: Implement PKI Management</p> <p><i>Exam objectives covered:</i> 3.9 Given a scenario, implement public key infrastructure 4.1 Given a scenario, use the appropriate tool to assess organizational security (OpenSSL only)</p>	<ul style="list-style-type: none"> Video: Backing Up and Restoring Certificates and Private Keys Video: Configuring a CA Hierarchy Review Activity: PKI Management 	<ul style="list-style-type: none"> Video: Backing Up and Restoring Certificates and Private Keys Video: Configuring a CA Hierarchy Review Activity: PKI Management 	<ul style="list-style-type: none"> Assisted Lab: Managing Certificates with OpenSSL
	<ul style="list-style-type: none"> Lesson 6: Practice Questions 	<ul style="list-style-type: none"> Lesson 6: Practice Questions 	
Lesson 7: Implementing Authentication Controls			
<p>Topic 7A: Summarize Authentication Design Concepts</p> <p><i>Exam objectives covered:</i> 2.4 Summarize authentication and authorization design concepts</p>	<ul style="list-style-type: none"> Video: Identity and Authentication Concepts Review Activity: Authentication Design Concepts 	<ul style="list-style-type: none"> Video: Identity and Authentication Concepts Review Activity: Authentication Design Concepts 	
<p>Topic 7B: Implement Knowledge-Based Authentication</p> <p><i>Exam objectives covered:</i> 1.2 Given a scenario, analyze potential indicators to determine the type of attack</p>	<ul style="list-style-type: none"> Video: Password Attacks Review Activity: Knowledge-Based Authentication PBQ: Implement Knowledge-Based Authentication 	<ul style="list-style-type: none"> Video: Password Attacks Review Activity: Knowledge-Based Authentication 	<ul style="list-style-type: none"> Assisted Lab: Auditing Passwords with a Password Cracking Utility

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<p>3.8 Given a scenario, implement authentication and authorization solutions</p> <p>4.1 Given a scenario, use the appropriate tool to assess organizational security (password crackers only)</p>			
<p>Topic 7C: Implement Authentication Technologies</p> <p><i>Exam objectives covered:</i></p> <p>2.4 Summarize authentication and authorization design concepts</p> <p>3.3 Given a scenario, implement secure network designs (HSM only)</p> <p>3.8 Given a scenario, implement authentication and authorization solutions</p>	<ul style="list-style-type: none"> • Video: Configuring EAP and AAA Authentication Technologies • Video: Implementing IAM • Review Activity: Authentication Technologies 	<ul style="list-style-type: none"> • Video: Configuring EAP and AAA Authentication Technologies • Video: Implementing IAM • Review Activity: Authentication Technologies 	<ul style="list-style-type: none"> • Assisted Lab: Managing Centralized Authentication
<p>Topic 7D: Summarize Biometrics Authentication Concepts</p> <p><i>Exam objectives covered:</i></p> <p>2.4 Summarize authentication and authorization design concepts</p>	<ul style="list-style-type: none"> • Review Activity: Biometrics Authentication Concepts 	<ul style="list-style-type: none"> • Review Activity: Biometrics Authentication Concepts 	
	<ul style="list-style-type: none"> • Lesson 7: Practice Questions 	<ul style="list-style-type: none"> • Lesson 7: Practice Questions 	
<p>Lesson 8: Implementing Identity and Account Management Controls</p>			
<p>Topic 8A: Implement Identity and Account Types</p> <p><i>Exam objectives covered:</i></p> <p>3.7 Given a scenario, implement identity and account management controls</p> <p>5.3 Explain the importance of policies to organizational security</p>	<ul style="list-style-type: none"> • Review Activity: Identity and Account Types 	<ul style="list-style-type: none"> • Review Activity: Identity and Account Types 	
<p>Topic 8B: Implement Account Policies</p> <p><i>Exam objectives covered:</i></p>	<ul style="list-style-type: none"> • Video: Account Management • Review Activity: Account Policies 	<ul style="list-style-type: none"> • Video: Account Management • Review Activity: Account Policies 	<ul style="list-style-type: none"> • Assisted Lab: Managing Access Controls in Windows Server

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3.7 Given a scenario, implement identity and account management controls	<ul style="list-style-type: none"> PBQ: Implement Account Policies 		<ul style="list-style-type: none"> Assisted Lab: Configuring a System for Auditing Policies
<p>Topic 8C: Implement Authorization Solutions</p> <p><i>Exam objectives covered:</i></p> <p>2.4 Summarize authentication and authorization design concepts</p> <p>3.8 Given a scenario, implement authentication and authorization solutions</p> <p>4.1 Given a scenario, use the appropriate tool to assess organizational security (chmod only)</p>	<ul style="list-style-type: none"> Video: Implementing Access Management Controls” Review Activity: Authorization Solutions 	<ul style="list-style-type: none"> Video: Implementing Access Management Controls” Review Activity: Authorization Solutions 	<ul style="list-style-type: none"> Assisted Lab: Managing Access Controls in Linux
<p>Topic 8D: Explain the Importance of Personnel Policies</p> <p><i>Exam objectives covered:</i></p> <p>5.3 Explain the importance of policies to organizational security</p>	<ul style="list-style-type: none"> Review Activity: Importance of Personnel Policies 	<ul style="list-style-type: none"> Review Activity: Importance of Personnel Policies 	
	<ul style="list-style-type: none"> Lesson 8: Practice Questions Lesson 8 PBQ: Implement Identity, Account Types, and Account Policies 	<ul style="list-style-type: none"> Lesson 8: Practice Questions 	<ul style="list-style-type: none"> APPLIED LAB: Configuring Identity and Access Management Controls
Lesson 9: Implementing Secure Network Designs			
<p>Topic 9A: Implement Secure Network Designs</p> <p><i>Exam objectives covered:</i></p> <p>3.3 Given a scenario, implement secure network designs</p>	<ul style="list-style-type: none"> Video: Secure Network Architecture Concepts Review Activity: Secure Network Designs 	<ul style="list-style-type: none"> Video: Secure Network Architecture Concepts Review Activity: Secure Network Designs 	
<p>Topic 9B: Implement Secure Switching and Routing</p> <p><i>Exam objectives covered:</i></p> <p>1.4 Given a scenario, analyze potential indicators associated with network attacks</p>	<ul style="list-style-type: none"> Video: Implementing Secure Switching Configurations Video: Configuring Network Access Control Review Activity: Secure Switching and Routing PBQ: Implement Secure Switching and Routing 	<ul style="list-style-type: none"> Video: Implementing Secure Switching Configurations Video: Configuring Network Access Control Review Activity: Secure Switching and Routing 	<ul style="list-style-type: none"> Assisted Lab: Implementing a Secure Network Design

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<p>3.1 Given a scenario, implement secure protocols (Routing and switching only)</p> <p>3.3 Given a scenario, implement secure network designs</p>			
<p>Topic 9C: Implement Secure Wireless Infrastructure</p> <p><i>Exam objectives covered:</i></p> <p>1.4 Given a scenario, analyze potential indicators associated with network attacks</p> <p>3.4 Given a scenario, install and configure wireless security settings</p>	<ul style="list-style-type: none"> • Video: Installing Wireless Networks • Video: Configuring Secure Wireless Networks • Review Activity: Secure Wireless Infrastructure • PBQ: Implement Secure Wireless Infrastructure 	<ul style="list-style-type: none"> • Video: Installing Wireless Networks • Video: Configuring Secure Wireless Networks • Review Activity: Secure Wireless Infrastructure 	
<p>Topic 9D: Implement Load Balancers</p> <p><i>Exam objectives covered:</i></p> <p>1.4 Given a scenario, analyze potential indicators associated with network attacks</p> <p>3.3 Given a scenario, implement secure network designs</p>	<ul style="list-style-type: none"> • Video: Load Balancer Configuration • Review Activity: Load Balancers 	<ul style="list-style-type: none"> • Video: Load Balancer Configuration • Review Activity: Load Balancers 	
	<ul style="list-style-type: none"> • Lesson 9: Practice Questions 	<ul style="list-style-type: none"> • Lesson 9: Practice Questions 	
Lesson 10: Implementing Network Security Appliances			
<p>Topic 10A: Implement Firewalls and Proxy Servers</p> <p><i>Exam objectives covered:</i></p> <p>3.3 Given a scenario, implement secure network designs</p>	<ul style="list-style-type: none"> • Video: Installing and Configuring a Firewall • Video: Configuring Firewall Rules • Review Activity: Firewalls and Proxy Servers • PBQ: Implement Firewalls and Proxy Servers 	<ul style="list-style-type: none"> • Video: Installing and Configuring a Firewall • Video: Configuring Firewall Rules • Review Activity: Firewalls and Proxy Servers 	<ul style="list-style-type: none"> • Assisted Lab: Configuring a Firewall
<p>Topic 10B: Implement Network Security Monitoring</p> <p><i>Exam objectives covered:</i></p> <p>3.3 Given a scenario, implement secure network designs</p>	<ul style="list-style-type: none"> • Video: Installing and Configuring an Intrusion Detection System • Review Activity: Network Security Monitoring 	<ul style="list-style-type: none"> • Video: Installing and Configuring an Intrusion Detection System • Review Activity: Network Security Monitoring 	<ul style="list-style-type: none"> • Assisted Lab: Configuring an Intrusion Detection System
<p>Topic 10C: Summarize the Use of SIEM</p>	<ul style="list-style-type: none"> • Video: Configuring Network Security Technologies 	<ul style="list-style-type: none"> • Video: Configuring Network Security Technologies 	

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<p><i>Exam objectives covered:</i></p> <p>1.7 Summarize the techniques used in security assessments</p> <p>3.3 Given a scenario, implement secure network designs</p> <p>4.1 Given a scenario, use the appropriate tool to assess organization security</p>	<ul style="list-style-type: none"> Review Activity: Use of SIEM 	<ul style="list-style-type: none"> Review Activity: Use of SIEM 	
	<ul style="list-style-type: none"> Lesson 10: Practice Questions 	<ul style="list-style-type: none"> Lesson 10: Practice Questions 	
<p>Lesson 11: Implementing Secure Network Protocols</p>			
<p>Topic 11A: Implement Secure Network Operations Protocols</p> <p><i>Exam objectives covered:</i></p> <p>1.4 Given a scenario, analyze potential indicators associated with network attacks</p> <p>3.1 Given a scenario, implement secure protocols</p>	<ul style="list-style-type: none"> Video: Implementing Secure Network Addressing Services Review Activity: Secure Network Operations Protocols 	<ul style="list-style-type: none"> Video: Implementing Secure Network Addressing Services Review Activity: Secure Network Operations Protocols 	
<p>Topic 11B: Implement Secure Application Protocols</p> <p><i>Exam objectives covered:</i></p> <p>2.1 Explain the importance of security concepts in an enterprise environment</p> <p>3.1 Given a scenario, implement secure protocols</p>	<ul style="list-style-type: none"> Video: Secure Web Services Video: Installing and Configuring a Secure Email Service Review Activity: Secure Application Protocols PBQ: Implement Secure Application Protocols 	<ul style="list-style-type: none"> Video: Secure Web Services Video: Installing and Configuring a Secure Email Service Review Activity: Secure Application Protocols 	<ul style="list-style-type: none"> Assisted Lab: Implementing Secure Network Addressing Services
<p>Topic 11C: Implement Secure Remote Access Protocols</p> <p><i>Exam objectives covered:</i></p> <p>3.1 Given a scenario, implement secure protocols</p> <p>3.3 Given a scenario, implement secure network designs</p> <p>4.1 Given a scenario, use the appropriate tool to assess organizational security (SSH only)</p>	<ul style="list-style-type: none"> Video: Implementing a Virtual Private Network Video: Secure Remote Administration Protocols Review Activity: Secure Remote Access Protocols PBQ: Implement Secure Remote Access Protocols 	<ul style="list-style-type: none"> Video: Implementing a Virtual Private Network Video: Secure Remote Administration Protocols Review Activity: Secure Remote Access Protocols 	<ul style="list-style-type: none"> Assisted Lab: Implementing a Virtual Private Network Assisted Lab: Implementing a Secure SSH Server
	<ul style="list-style-type: none"> Lesson 11: Practice Questions 	<ul style="list-style-type: none"> Lesson 11: Practice Questions 	
<p>Lesson 12: Implementing Host Security Solutions</p>			

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<p>Topic 12A: Implement Secure Firmware</p> <p><i>Exam objectives covered:</i></p> <p>1.2 Given a scenario, analyze potential indicators to determine the type of attack</p> <p>3.2 Given a scenario, implement host or application security solutions</p> <p>5.3 Explain the importance of policies to organizational security</p>	<ul style="list-style-type: none"> • Video: Discussing Secure Hardware Systems Design • Review Activity: Secure Firmware 	<ul style="list-style-type: none"> • Video: Discussing Secure Hardware Systems Design • Review Activity: Secure Firmware 	
<p>Topic 12B: Implement Endpoint Security</p> <p><i>Exam objectives covered:</i></p> <p>3.2 Given a scenario, implement host or application security solutions</p>	<ul style="list-style-type: none"> • Video: Securing Hosts • Review Activity: Endpoint Security 	<ul style="list-style-type: none"> • Video: Securing Hosts • Review Activity: Endpoint Security 	<ul style="list-style-type: none"> • Assisted Lab: Implementing Endpoint Protection
<p>Topic 12C: Explain Embedded System Security Implications</p> <p><i>Exam objectives covered:</i></p> <p>2.6 Explain the security implications of embedded and specialized systems</p>	<ul style="list-style-type: none"> • Video: Discussing Secure Embedded System Design • Review Activity: Embedded System Security Implications 	<ul style="list-style-type: none"> • Video: Discussing Secure Embedded System Design • Review Activity: Embedded System Security Implications 	
	<ul style="list-style-type: none"> • Lesson 12: Practice Questions 	<ul style="list-style-type: none"> • Lesson 12: Practice Questions 	<ul style="list-style-type: none"> • APPLIED LAB: Securing the Network Infrastructure
<p>Lesson 13: Implementing Secure Mobile Solutions</p>			
<p>Topic 13A: Implement Mobile Device Management</p> <p><i>Exam objectives covered:</i></p> <p>3.5 Given a scenario, implement secure mobile solutions</p>	<ul style="list-style-type: none"> • Video: Implementing Mobile Device Security • Review Activity: Mobile Device Management • PBQ: Implement Mobile Device Management 	<ul style="list-style-type: none"> • Video: Implementing Mobile Device Security • Review Activity: Mobile Device Management 	
<p>Topic 13B: Implement Secure Mobile Device Connections</p> <p><i>Exam objectives covered:</i></p> <p>1.4 Given a scenario, analyze potential indicators associated with network attacks</p>	<ul style="list-style-type: none"> • Review Activity: Secure Mobile Device Connections 	<ul style="list-style-type: none"> • Review Activity: Secure Mobile Device Connections 	

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3.5 Given a scenario, implement secure mobile solutions			
	<ul style="list-style-type: none"> Lesson 13: Practice Questions 	<ul style="list-style-type: none"> Lesson 13: Practice Questions 	
Lesson 14: Summarizing Secure Application Concepts			
<p>Topic 14A: Analyze Indicators of Application Attacks</p> <p><i>Exam objectives covered:</i> 1.3 Given a scenario, analyze potential indicators associated with application attacks</p>	<ul style="list-style-type: none"> Review Activity: Indicators of Application Attacks 	<ul style="list-style-type: none"> Review Activity: Indicators of Application Attacks 	<ul style="list-style-type: none"> Assisted Lab: Identifying Application Attack Indicators
<p>Topic 14B: Analyze Indicators of Web Application Attacks</p> <p><i>Exam objectives covered:</i> 1.3 Given a scenario, analyze potential indicators associated with application attacks</p>	<ul style="list-style-type: none"> Video: Exploiting Session Vulnerabilities Video: Identifying a Man-in-the-Browser Attack Review Activity: Indicators of Web Application Attacks 	<ul style="list-style-type: none"> Video: Exploiting Session Vulnerabilities Video: Identifying a Man-in-the-Browser Attack Review Activity: Indicators of Web Application Attacks 	<ul style="list-style-type: none"> Assisted Lab: Identifying a Browser Attack
<p>Topic 14C: Summarize Secure Coding Practices</p> <p><i>Exam objectives covered:</i> 2.3 Summarize secure application development, deployment, and automation concepts 3.2 Given a scenario, implement host or application security solutions</p>	<ul style="list-style-type: none"> Video: Incorporating Security in the Software Development Cycle Review Activity: Secure Coding Practices 	<ul style="list-style-type: none"> Video: Incorporating Security in the Software Development Cycle Review Activity: Secure Coding Practices 	
<p>Topic 14D: Implement Secure Script Environments</p> <p><i>Exam objectives covered:</i> 1.4 Given a scenario, analyze potential indicators associated with network attacks 3.2 Given a scenario, implement host or application security solutions 4.1 Given a scenario, use the appropriate tool to assess organizational security</p>	<ul style="list-style-type: none"> Review Activity: Secure Script Environments PBQ: Implement Secure Script Environments 	<ul style="list-style-type: none"> Review Activity: Secure Script Environments PBQ: Implement Secure Script Environments 	<ul style="list-style-type: none"> Assisted Lab: Implementing PowerShell Security Assisted Lab: Identifying Malicious Code

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<p>Topic 14E: Summarize Deployment and Automation Concepts</p> <p><i>Exam objectives covered:</i> 2.3 Summarize secure application development, deployment, and automation concepts</p>	<ul style="list-style-type: none"> Review Activity: Deployment and Automation Concepts 	<ul style="list-style-type: none"> Review Activity: Deployment and Automation Concepts 	
	<ul style="list-style-type: none"> Lesson 14: Practice Questions 	<ul style="list-style-type: none"> Lesson 14: Practice Questions 	<ul style="list-style-type: none"> APPLIED LAB: Identifying Application Attacks
Lesson 15: Implementing Secure Cloud Solutions			
<p>Topic 15A: Summarize Secure Cloud and Virtualization Services</p> <p><i>Exam objectives covered:</i> 2.2 Summarize virtualization and cloud computing concepts</p>	<ul style="list-style-type: none"> Video: Secure Virtualization Infrastructure Review Activity: Secure Cloud and Virtualization Services 	<ul style="list-style-type: none"> Video: Secure Virtualization Infrastructure Review Activity: Secure Cloud and Virtualization Services 	
<p>Topic 15B: Apply Cloud Security Solutions</p> <p><i>Exam objectives covered:</i> 1.2 Given a scenario, analyze potential indicators to determine the type of attack (Cloud-based versus on-premises only) 2.2 Summarize virtualization and cloud computing concepts 3.6 Given a scenario, apply cybersecurity solutions to the cloud</p>	<ul style="list-style-type: none"> Video: Securing Virtualized and Cloud-Based Resources Review Activity: Cloud Security Solutions PBQ: Apply Cloud Security Solutions 	<ul style="list-style-type: none"> Video: Securing Virtualized and Cloud-Based Resources Review Activity: Cloud Security Solutions 	
<p>Topic 15C: Summarize Infrastructure as Code Concepts</p> <p><i>Exam objectives covered:</i> 2.2 Summarize virtualization and cloud computing concepts</p>	<ul style="list-style-type: none"> Review Activity: Infrastructure as Code 	<ul style="list-style-type: none"> Review Activity: Infrastructure as Code 	
	<ul style="list-style-type: none"> Lesson 15: Practice Questions 	<ul style="list-style-type: none"> Lesson 15: Practice Questions 	
Lesson 16: Explaining Data Privacy and Protection Concepts			

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<p>Topic 16A: Explain Privacy and Data Sensitivity Concepts</p> <p><i>Exam objectives covered:</i></p> <p>2.1 Explain the importance of security concepts in an enterprise environment</p> <p>5.3 Explain the importance of policies to organizational security</p> <p>5.5 Explain privacy and sensitive data concepts in relation to security</p>	<ul style="list-style-type: none"> • Video: Managing Data Security • Review Activity: Privacy and Data Sensitivity Concepts • PBQ: Explain Privacy and Data Sensitivity Concepts 	<ul style="list-style-type: none"> • Video: Managing Data Security • Review Activity: Privacy and Data Sensitivity Concepts 	
<p>Topic 16B: Explain Privacy and Data Protection Controls</p> <p><i>Exam objectives covered:</i></p> <p>2.1 Explain the importance of security concepts in an enterprise environment</p> <p>3.2 Given a scenario, implement host or application security solutions</p> <p>5.5 Explain privacy and sensitive data concepts in relation to security</p>	<ul style="list-style-type: none"> • Review Activity: Privacy and Data Protection Controls 	<ul style="list-style-type: none"> • Review Activity: Privacy and Data Protection Controls 	
	<ul style="list-style-type: none"> • Lesson 16: Practice Questions 	<ul style="list-style-type: none"> • Lesson 16: Practice Questions 	
<p>Lesson 17: Performing Incident Response</p>			
<p>Topic 17A: Summarize Incident Response Procedures</p> <p><i>Exam objectives covered:</i></p> <p>4.2 Summarize the importance of policies, processes, and procedures for incident response</p>	<ul style="list-style-type: none"> • Video: Responding to Security Incidents • Review Activity: Incident Response Procedures • PBQ: Summarize Incident Response Procedures 	<ul style="list-style-type: none"> • Video: Responding to Security Incidents • Review Activity: Incident Response Procedures 	
<p>Topic 17B: Utilize Appropriate Data Sources for Incident Response</p> <p><i>Exam objectives covered:</i></p> <p>4.3 Given an incident, utilize appropriate data sources to support an investigation</p>	<ul style="list-style-type: none"> • Video: Utilizing Data Sources for Incident Response • Review Activity: Appropriate Data Sources for Incident Response 	<ul style="list-style-type: none"> • Video: Utilizing Data Sources for Incident Response • Review Activity: Appropriate Data Sources for Incident Response 	<ul style="list-style-type: none"> • Assisted Lab: Managing Data Sources for Incident Response

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<p>Topic 17C: Apply Mitigation Controls</p> <p><i>Exam objectives covered:</i> 1.2 Given a scenario, analyze potential indicators to determine the type of attack 4.4 Given an incident, apply mitigation techniques or controls to secure an environment</p>	<ul style="list-style-type: none"> • Video: Applying Mitigation Controls • Review Activity: Mitigation Controls 	<ul style="list-style-type: none"> • Video: Applying Mitigation Controls • Review Activity: Mitigation Controls 	<ul style="list-style-type: none"> • Assisted Lab: Configuring Mitigation Controls
	<ul style="list-style-type: none"> • Lesson 17: Practice Questions 	<ul style="list-style-type: none"> • Lesson 17: Practice Questions 	
<p>Lesson 18: Explaining Digital Forensics</p>			
<p>Topic 18A: Explain Key Aspects of Digital Forensics Documentation</p> <p><i>Exam objectives covered:</i> 4.5 Explain the key aspects of digital forensics</p>	<ul style="list-style-type: none"> • Review Activity: Digital Forensics Documentation 	<ul style="list-style-type: none"> • Review Activity: Digital Forensics Documentation 	
<p>Topic 18B: Explain Key Aspects of Digital Forensics Evidence Acquisition</p> <p><i>Exam objectives covered:</i> 4.1 Given a scenario, use the appropriate tool to assess organizational security 4.5 Explain the key aspects of digital forensics</p>	<ul style="list-style-type: none"> • Video: Investigating Security Incidents • Review Activity: Digital Forensics Evidence Acquisition 	<ul style="list-style-type: none"> • Video: Investigating Security Incidents • Review Activity: Digital Forensics Evidence Acquisition 	<ul style="list-style-type: none"> • Assisted Lab: Acquiring Digital Forensics Evidence
	<ul style="list-style-type: none"> • Lesson 18: Practice Questions 	<ul style="list-style-type: none"> • Lesson 18: Practice Questions 	
<p>Lesson 19: Summarizing Risk Management Concepts</p>			
<p>Topic 19A: Explain Risk Management Processes and Concepts</p> <p><i>Exam objectives covered:</i> 5.4 Summarize risk management processes and concepts</p>	<ul style="list-style-type: none"> • Video: Managing Risk • Review Activity: Risk Management Processes and Concepts • PBQ: Explain Risk Management Processes and Concepts 	<ul style="list-style-type: none"> • Video: Managing Risk • Review Activity: Risk Management Processes and Concepts 	
<p>Topic 19B: Explain Business Impact Analysis Concepts</p>	<ul style="list-style-type: none"> • Video: Selecting a Disaster Recovery Process 	<ul style="list-style-type: none"> • Video: Selecting a Disaster Recovery Process 	

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<p><i>Exam objectives covered:</i> 5.4 Summarize risk management processes and concepts</p>	<ul style="list-style-type: none"> Review Activity: Business Impact Analysis Concepts 	<ul style="list-style-type: none"> Review Activity: Business Impact Analysis Concepts 	
	<ul style="list-style-type: none"> Lesson 19: Practice Questions 	<ul style="list-style-type: none"> Lesson 19: Practice Questions 	
<p>Lesson 20: Implementing Cybersecurity Resilience</p>			
<p>Topic 20A: Implement Redundancy Strategies</p> <p><i>Exam objectives covered:</i> 2.5 Given a scenario, implement cybersecurity resilience</p>	<ul style="list-style-type: none"> Video: Developing a Continuity of Operations Plan Review Activity: Redundancy Strategies PBQ: Implement Redundancy Strategies 	<ul style="list-style-type: none"> Video: Developing a Continuity of Operations Plan Review Activity: Redundancy Strategies 	
<p>Topic 20B: Implement Backup Strategies</p> <p><i>Exam objectives covered:</i> 2.5 Given a scenario, implement cybersecurity resilience</p>	<ul style="list-style-type: none"> Review Activity: Backup Strategies 	<ul style="list-style-type: none"> Review Activity: Backup Strategies 	<ul style="list-style-type: none"> Assisted Lab: Backing Up and Restoring Data in Windows and Linux
<p>Topic 20C: Implement Cybersecurity Resiliency Strategies</p> <p><i>Exam objectives covered:</i> 2.1 Explain the importance of security concepts in an enterprise environment 2.5 Given a scenario, implement cybersecurity resilience 5.3 Explain the importance of policies to organizational security</p>	<ul style="list-style-type: none"> Review Activity: Cybersecurity Resiliency Strategies 	<ul style="list-style-type: none"> Review Activity: Cybersecurity Resiliency Strategies 	
	<ul style="list-style-type: none"> Lesson 20: Practice Questions 	<ul style="list-style-type: none"> Lesson 20: Practice Questions 	<ul style="list-style-type: none"> APPLIED LAB: Managing Incident Response, Mitigation and Recovery
<p>Lesson 21: Explaining Physical Security</p>			
<p>Topic 21A: Explain the Importance of Physical Site Security Controls</p> <p><i>Exam objectives covered:</i></p>	<ul style="list-style-type: none"> Video: Implementing Physical Controls Review Activity: Physical Site Security Controls 	<ul style="list-style-type: none"> Video: Implementing Physical Controls Review Activity: Physical Site Security Controls 	

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1.2 Given a scenario, analyze potential indicators to determine the type of attack 2.7 Explain the importance of physical security controls			
Topic 21B: Explain the Importance of Physical Host Security Controls <i>Exam objectives covered:</i> 2.7 Explain the importance of physical security controls 4.1 Given a scenario, use the appropriate tool to assess organizational security (Data sanitization only)	<ul style="list-style-type: none"> Review Activity: Physical Host Security Controls 	<ul style="list-style-type: none"> Review Activity: Physical Host Security Controls 	
	<ul style="list-style-type: none"> Lesson 21: Practice Questions 	<ul style="list-style-type: none"> Lesson 21: Practice Questions 	
	<ul style="list-style-type: none"> Final Assessment 	<ul style="list-style-type: none"> Final Assessment 	
	<ul style="list-style-type: none"> Strengths and Weaknesses Dashboard Flashcards Game Center 	<ul style="list-style-type: none"> Strengths and Weaknesses Dashboard 	
Student Resources	<ul style="list-style-type: none"> Mapping Course Content to CompTIA Security+ Exam SY0-601 (pdf) 	<ul style="list-style-type: none"> Mapping Course Content to CompTIA Security+ Exam SY0-601 (pdf) 	
Instructor Resources	<ul style="list-style-type: none"> Presentation Planner for Security+ Exam SY0-601 (xlsx) Transition Guide for Official CompTIA Security+ Exam SY0-501 to Official CompTIA Security+ Exam SY0-601 (pdf) Onboarding Guide for Official CompTIA Security+ Exam SY0-601 Content (pdf) Mapping Course Content to CompTIA Security+ Exam SY0-601 (pdf) Instructor PowerPoint Presentations for Security+ Exam SY0-601 (zip) 	<ul style="list-style-type: none"> Presentation Planner for Security+ Exam SY0-601 (xlsx) Transition Guide for Official CompTIA Security+ Exam SY0-501 to Official CompTIA Security+ Exam SY0-601 (pdf) Onboarding Guide for Official CompTIA Security+ Exam SY0-601 Content (pdf) Mapping Course Content to CompTIA Security+ Exam SY0-601 (pdf) Instructor PowerPoint Presentations for Security+ Exam SY0-601 (zip) 	