Course Outline for Security+ (SY0-701) CertMaster Learn, Student Guide and CertMaster Labs

Course Outline	CertMaster Learn	Student Guide eBook	CertMaster Labs
Overview	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.	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.	Labs are available at the course level or integrated as study tasks within CertMaster Learn.
Lesson 1: Summarize Fundamental Security Concepts			
Topic 1A: Security Concepts *Exam objectives covered: 1.2 Summarize fundamental security concepts.*	• Video: Job Roles Using Security+ • Review Activity: Security Concepts	• Video: Job Roles Using Security+ • Review Activity: Security Concepts	
Topic 1B: Security Controls *Exam objectives covered:* *1.1 Compare and contrast various types of security controls.*	• PBQ: Compare and Contrast Security Control and Framework Types • Review Activity: Security Controls	• Review Activity: Security Controls	
	• Lesson 1: Practice Questions	• Lesson 1: Practice Questions	• Assisted Lab: Explore the Lab Environment • Assisted Lab: Perform System Configuration Gap Analysis • Assisted Lab: Configuring Examples of Security Control Types
Lesson 2: Compare Threat Types			

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Topic 2A: Threat Actors *Exam objectives covered:* *2.1 Compare and contrast common threat actors and motivations.*	• Video: Identifying Common Threat Actors and Motivations • Review Activity: Threat Actors	• Video: Identifying Common Threat Actors and Motivations • Review Activity: Threat Actors	
Topic 2B: Attack Surfaces *Exam objectives covered:* *2.2 Explain common threat vectors and attack surfaces.*	• Review Activity: Attack Surfaces	• Review Activity: Attack Surfaces	
Topic 2C: Social Engineering *Exam objectives covered:* *2.2 Explain common threat vectors and attack surfaces.*	• Video: Use the Social Engineer Toolkit • PBQ: Compare and Contrast Social Engineering Techniques • Review Activity: Social Engineering	• Video: Use the Social Engineer Toolkit • Review Activity: Social Engineering	
	• Lesson 2: Practice Questions	• Lesson 2: Practice Questions	• Assisted Lab: Finding Open Service Ports • Assisted Lab: Using SET to Perform Social Engineering
Lesson 3: Explain Cryptographic Solutions			
Topic 3A: Cryptographic Algorithms *Exam objectives covered:* *1.4 Explain the importance of using appropriate cryptographic solutions.*	• Video: Identifying Symmetric Cryptographic Algorithms • PBQ: Identify Cryptographic Modes of Operation • Review Activity: Cryptographic Algorithms	• Video: Identifying Symmetric Cryptographic Algorithms • Review Activity: Cryptographic Algorithms	

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Topic 3B: Public Key Infrastructure *Exam objectives covered: 1.4 Explain the importance of using appropriate cryptographic solutions.*	• PBQ: Implement Certificates and Certificate Authorities • Review Activity: Public Key Infrastructure	• Review Activity: Public Key Infrastructure	
Topic 3C: Cryptographic Solutions *Exam objectives covered: 1.4 Explain the importance of using appropriate cryptographic solutions.*	• Review Activity: Cryptographic Solutions	• Review Activity: Cryptographic Solutions	
	• Lesson 3: Practice Questions	• Lesson 3: Practice Questions	• APPLIED Lab: Using Storage Encryption • Assisted Lab: Using Hashing and Salting
Lesson 4: Implement Identity and Access Management			
Topic 4A: Authentication *Exam objectives covered: 4.6 Given a scenario, implement and maintain identity and access management.*	• Video: Implementing IAM • Review Activity: Authentication	• Video: Implementing IAM • Review Activity: Authentication	
Topic 4B: Authorization *Exam objectives covered: 4.6 Given a scenario, implement and maintain identity*	• Video: Examining the Access Token • Review Authorization • PBQ: Apply Cloud Security Solutions	• Video: Examining the Access Token • Review Activity: Authorization	

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and access management.			
Topic 4C: Identity Management *Exam objectives covered: 4.6 Given a scenario, implement and maintain identity and access management*	• Review Activity: Identity Management	• Review Activity: Identity Management	
	• Lesson 4: Practice Questions	• Lesson 4: Practice Questions	• Assisted Lab: Managing Password Security • Assisted Lab: Managing Permissions
Lesson 5: Secure Enterprise Network Architecture			
Topic 5A: Enterprise Network Architecture *Exam objectives covered: 3.1 Compare and contrast security implications of different architecture models.* *3.2 Given a scenario, apply security principles to secure enterprise infrastructure.*	• Video: Configuring EAP and AAA Authentication Technologies • Review Activity: Enterprise Network Architecture	• Video: Configuring EAP and AAA Authentication Technologies • Review Activity: Enterprise Network Architecture	
Topic 5B: Network Security Appliances *Exam objectives covered: 3.2 Given a scenario, apply security principles to secure enterprise infrastructure.*	• Video: Load Balancer Configuration • Review Activity: Network Security Appliances	• Video: Load Balancer Configuration • Review Activity: Network Security Appliances	

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Topic 5C: Secure Communications *Exam objectives covered: 3.2 Given a scenario, apply security principles to secure enterprise infrastructure.*	• Video: Secure Remote Administration Protocols • PBQ: Implement Secure Remote Access Protocols • Review Activity: Secure Communications	• Video: Secure Remote Administration Protocols • Review Activity: Secure Communications	
	• Lesson 5: Practice Questions	• Lesson 5: Practice Questions	• Assisted Lab: Setting up Remote Access • Assisted Lab: Using TLS Tunneling
Lesson 6: Secure Cloud Network Architecture			
Topic 6A: Cloud Infrastructure *Exam objectives covered: 3.1 Compare and contrast security implications of different architecture models.*	• Review Activity: Cloud Infrastructure • PBQ: Analyze Infrastructure Types and Functions	• Review Activity: Cloud Infrastructure	
Topic 6B: Embedded Systems and Zero Trust Architecture *Exam objectives covered: 1.2 Summarize fundamental security concepts.* *3.1 Compare and contrast security implications of different architecture models.*	• Review Activity: Embedded Systems and Zero Trust Architecture	• Review Activity: Embedded Systems and Zero Trust Architecture	

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	• Lesson 6: Practice Questions	• Lesson 6: Practice Questions	• Assisted Lab: Using Containers • Assisted Lab: Using Virtualization
Lesson 7: Explain Resiliency and Site Security Concepts			
Topic 7A: Asset Management *Exam objectives covered: 3.4 Explain the importance of resilience and recovery in security architecture.* *4.2 Explain the security implications of proper hardware, software, and data asset management.*	• Video: Applying the Elements of Asset Management • Review Activity: Asset Management	• Video: Applying the Elements of Asset Management Review Activity: Asset Management	
Topic 7B: Redundancy Strategies *Exam objectives covered: 1.2 Summarize fundamental security concepts.* *3.4 Explain the importance of resilience and recovery in security architecture.*	• Video: Detect Malicious Network Traffic with a Honeypot • PBQ: Incorporate Redundancy Strategies • Review Activity: Redundancy Strategies	• Video: Detect Malicious Network Traffic with a Honeypot • Review Activity: Redundancy Strategies	
Topic 7C: Physical Security *Exam objectives covered: 1.2 Summarize*	• Review Activity: Physical Security	• Review Activity: Physical Security	

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fundamental security concepts.			
	• Lesson 7: Practice Questions	• Lesson 7: Practice Questions	• Assisted Lab: Implement Backups • Assisted Lab: Performing Drive Sanitization
Lesson 8: Explain Vulnerability Management			
Topic 8A: Device and OS Vulnerabilities *Exam objectives covered: 2.3 Explain various types of vulnerabilities.*	• PBQ: Identify Types of Vulnerabilities • Review Activity: Device and OS Vulnerabilities	• Review Activity: Device and OS Vulnerabilities	
Topic 8B: Application and Cloud Vulnerabilities *Exam objectives covered: 2.3 Explain various types of vulnerabilities.*	• Video: Understand Various Types of Vulnerabilities • Review Activity: Application and Cloud Vulnerabilities	• Video: Understand Various Types of Vulnerabilities • Review Activity: Application and Cloud Vulnerabilities	
Topic 8C: Vulnerability Identification Methods *Exam objectives covered: 4.3 Explain various activities associated with vulnerability management.*	• Video: Scanning a Network with Nessus • Review Activity: Vulnerability Identification Methods	• Video: Scanning a Network with Nessus • Review Activity: Vulnerability Identification Methods	
Topic 8D: Vulnerability Analysis and Remediation	• Review Activity: Vulnerability Analysis and Remediation	• Review Activity: Vulnerability Analysis and Remediation	

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Exam objectives covered: 4.3 Explain various activities associated with vulnerability management.			
	• Lesson 8: Practice Questions	• Lesson 8: Practice Questions	• Assisted Lab: Exploiting and Detecting SQLi • Assisted Lab: Working with Threat Feeds • Assisted Lab: Performing Vulnerability Scans
Lesson 9: Evaluate Network Security Capabilities			
Topic 9A: Network Security Baselines *Exam objectives covered: 4.1 Given a scenario, apply common security techniques to computing resources.* *4.5 Given a scenario, modify enterprise capabilities to enhance security.*	• Review Activity: Network Security Baselines • PBQ: Implement Secure Wireless Infrastructure	• Review Activity: Network Security Baselines	
Topic 9B: Network Security Capability Enhancement *Exam objectives covered: 4.5 Given a scenario, modify enterprise capabilities to enhance security.*	• Video: Configuring Application Control Software • Review Activity: Network Security Capability Enhancement	• Video: Configuring Application Control Software • Review Activity: Network Security Capability Enhancement	
	• Lesson 9: Practice Questions	• Lesson 9: Practice Questions	• Assisted Lab: Understanding Security Baselines

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			• APPLIED Lab: Implementing a Firewall
Lesson 10: Assess Endpoint Security Capabilities			
Topic 10A: Implement Endpoint Security *Exam objectives covered: 2.5 Explain the purpose of mitigation techniques used to secure the enterprise.* *4.1 Given a scenario, apply common security techniques to computing resources.* *4.5 Given a scenario, modify enterprise capabilities to enhance security.*	• Video: Removing Unnecessary Services • Video: Hardening an Operating System • Review Activity: Implement Endpoint Security	• Video: Removing Unnecessary Services • Video: Hardening an Operating System • Review Activity: Implement Endpoint Security	
Topic 10B: Mobile Device Hardening *Exam objectives covered: 4.1 Given a scenario, apply common security techniques to computing resources.*	• PBQ: Implement Mobile Device Management • Review Activity: Mobile Device Hardening	• Review Activity: Mobile Device Hardening	
	• Lesson 10: Practice Questions	• Lesson 10: Practice Questions	• Assisted Lab: Using Group Policy • APPLIED Lab: Hardening
Lesson 11: Enhance Application Security Capabilities			

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Topic 11A: Application Protocol Security Baselines *Exam objectives covered: 4.5 Given a scenario, modify enterprise capabilities to enhance security.*	• Video: Securing an Email Server • PBQ: Modify Enterprise Capabilities to Enhance Security • Review Activity: Application Protocol Security Baselines	• Video: Securing an Email Server • Review Activity: Application Protocol Security Baselines	
Topic 11B: Cloud and Web Application Security Concepts *Exam objectives covered: 4.1 Given a scenario, apply common security techniques to computing resources.*	• Review Activity: Cloud and Web Application Security Concepts	• Review Activity: Cloud and Web Application Security Concepts	
	• Lesson 11: Practice Questions	• Lesson 11: Practice Questions	• Assisted Lab: Performing DNS Filtering • Assisted Lab: Configuring System Monitoring
Lesson 12: Explain Incident Response and Monitoring Concepts			
Topic 12A: Incident Response *Exam objectives covered: 4.8 Explain appropriate incident response activities.*	• PBQ: Summarize Incident Response Procedures • Review Activity: Incident Response	• Review Activity: Incident Response	
Topic 12B: Digital Forensics *Exam objectives covered: 4.8 Explain*	• Video: Investigating Security Incidents • Review Activity: Digital Forensics • PBQ:	• Video: Investigating Security Incidents • Review Activity: Digital Forensics	

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appropriate incident response activities.			
Topic 12C: Data Sources *Exam objectives covered: 4.9 Given a scenario, use data sources to support an investigation.*	• Video: Analyzing Packets • Review Activity: Data Sources	• Video: Analyzing Packets • Review Activity: Data Sources	
Topic 12D: Alerting and Monitoring Tools *Exam objectives covered: 4.4 Explain security alerting and monitoring concepts and tools.*	• Video: Understand Security Alerting and Monitoring Concepts and Tools • Review Activity: Alerting and Monitoring Tools	• Video: Understand Security Alerting and Monitoring Concepts and Tools • Review Activity: Alerting and Monitoring Tools	
	• Lesson 12: Practice Questions	• Lesson 12: Practice Questions	• APPLIED Lab: Incident Response: Detection • APPLIED Lab: Performing Digital Forensics • Assisted Lab: Performing Root Cause Analysis • APPLIED Lab: Using Network Sniffers
Lesson 13: Analyze Indicators of Malicious Activity			
Topic 13A: Malware Attack Indicators *Exam objectives covered: 2.4 Given a scenario, analyze indicators of malicious activity.*	• PBQ: Analyze Indicators of Malware-Based Attacks • Review Activity: Malware Attack Indicators	• Review Activity: Malware Attack Indicators	
Topic 13B: Physical and Network Attack Indicators	• Video: Password Attacks • Video: Implementing Secure Network Addressing Services	• Video: Password Attacks • Video: Implementing Secure Network Addressing Services	

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Exam objectives covered: 2.4 Given a scenario, analyze indicators of malicious activity.	• Review Activity: Physical and Network Attack Indicators	• Review Activity: Physical and Network Attack Indicators	
Topic 13C: Application Attack Indicators *Exam objectives covered: 2.4 Given a scenario, analyze indicators of malicious activity.*	• Review Activity: Application Attack Indicators	• Review Activity: Application Attack Indicators	
	• Lesson 13: Practice Questions	• Lesson 13: Practice Questions	• Assisted Lab: Detecting and Responding to Malware • Assisted Lab: Understanding On-Path Attacks
Lesson 14: Summarize Security Governance Concepts			
Topic 14A: Policies, Standards, and Procedures *Exam objectives covered: 5.1 Summarize elements of effective security governance.*	• PBQ: Apply Appropriate Polices and Regulations • Review Activity: Policies, Standards, and Procedures	• Review Activity: Policies, Standards, and Procedures	
Topic 14B: Change Management *Exam objectives covered: 1.3 Explain the importance of change management processes and the impact to security.*	• Video: Understand the Importance of Change Management Processes • Review Activity: Change Management	• Video: Understand the Importance of Change Management Processes • Review Activity: Change Management	
Topic 14C: Automation and Orchestration	• Video: Understand Automation and Orchestration for Secure Operations	• Video: Understand Automation and Orchestration for Secure Operations	

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Exam objectives covered: 4.7 Explain the importance of automation and orchestration related to secure operations.	• Review Activity: Automation and Orchestration	• Review Activity: Automation and Orchestration	
	• Lesson 14: Practice Questions	• Lesson 14: Practice Questions	• ADAPTIVE Lab: Using a Playbook • Assisted Lab: Implementing Allow Lists and Deny Lists • Assisted Lab: Use Cases of Automation and Scripting
Lesson 15: Explain Risk Management Processes			
Topic 15A: Risk Management Processes and Concepts *Exam objectives covered: 5.2 Explain elements of the risk management process.*	• Review Activity: Risk Management Processes and Concepts	• Review Activity: Risk Management Processes and Concepts	
Topic 15B: Vendor Management Concepts *Exam objectives covered: 5.3 Explain the processes associated with third-party risk assessment and management.*	• Review Activity: Vendor Management Concepts	• Review Activity: Vendor Management Concepts	
Topic 15C: Audits and Assessments *Exam objectives covered: 5.5 Explain types and purposes of audits and assessments.*	• Video: Exploring Penetration Testing Tools • Review Activity: Audits and Assessments	• Video: Exploring Penetration Testing Tools • Review Activity: Audits and Assessments	

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	• Lesson 15: Practice Questions	• Lesson 15: Practice Questions	• Assisted Lab: Performing Reconnaissance • Assisted Lab: Performing Penetration Testing
Lesson 16: Summarize Data Protection and Compliance Concepts			
Topic 16A: Data Classification and Compliance *Exam objectives covered: 3.3 Compare and contrast concepts and strategies to protect data.* *5.4 Summarize elements of effective security compliance.*	• Video: Understand Effective Security Compliance • PBQ: Explain Privacy and Data Sensitivity Concepts • PBQ: Apply Appropriate Techniques to Secure Data • Review Activity: Data Classification and Compliance	• Video: Understand Effective Security Compliance • Review Activity: Data Classification and Compliance	
Topic 16B: Personnel Policies *Exam objectives covered: 5.6 Given a scenario, implement security awareness practices.*			
	Lesson 16: Practice Questions	Lesson 16: Practice Questions	• Assisted Lab: Training and Awareness through Simulation • Challenge Lab: Discovering Anomalous Behavior
	• Final Assessment	• Final Assessment	
	• Strengths and Weaknesses Dashboard • Flashcards • Game Center	• Strengths and Weaknesses Dashboard	
Student Resources	• Mapping Course Content to CompTIA	• Mapping Course Content to CompTIA Security+ SY0-701 (pdf)	

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	Security+ SY0-701 (pdf)		
Instructor Resources	• Presentation Planner for Security+ SY0-701 (xlsx) • Transition Guide for Official CompTIA Security+ Exam SY0-601 to Official CompTIA Security+ SY0-701 (pdf) • Onboarding Guide for Official CompTIA Security+ SY0-701 Content (pdf) • Mapping Course Content to CompTIA Security+ SY0-701 (pdf) • Instructor PowerPoint Presentations for Security+ SY0-701 (zip)	• Presentation Planner for Security+ SY0-701 (xlsx) • Transition Guide for Official CompTIA Security+ Exam SY0-601 to Official CompTIA Security+ SY0-701 (pdf) • Onboarding Guide for Official CompTIA Security+ SY0-701 Content (pdf) • Mapping Course Content to CompTIA Security+ SY0-701 (pdf) • Instructor PowerPoint Presentations for Security+ SY0-701 (zip)	