## **Course Outline**

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

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2.1 Compare and contrast common threat actors and motivations.	Review Activity:     Threat Actors	Review Activity:     Threat Actors	
Topic 2B: Attack Surfaces <i>Exam objectives</i> <i>covered:</i> <i>2.2 Explain common</i> <i>threat vectors and</i> <i>attack surfaces.</i>	Review Activity: Attack Surfaces	• Review Activity: Attack Surfaces	
Topic 2C: Social Engineering <i>Exam objectives</i> <i>covered:</i> <i>2.2 Explain common</i> <i>threat vectors and</i> <i>attack surfaces.</i>	<ul> <li>Video: Use the Social Engineer Toolkit</li> <li>PBQ: Compare and Contrast Social Engineering Techniques</li> <li>Review Activity: Social Engineering</li> </ul>	<ul> <li>Video: Use the Social Engineer Toolkit</li> <li>Review Activity: Social Engineering</li> </ul>	
Lagar 2 Fundain	Lesson 2: Practice     Questions	Lesson 2: Practice     Questions	<ul> <li>Assisted Lab: Finding Open Service Ports</li> <li>Assisted Lab: Using SET to Perform Social Engineering</li> </ul>
Lesson 3: Explain Cryptographic Solutions			
Topic 3A: Cryptographic Algorithms <i>Exam objectives</i> <i>covered:</i> 1.4 Explain the <i>importance of using</i> <i>appropriate</i> <i>cryptographic</i> <i>solutions.</i>	<ul> <li>Video: Identifying Symmetric Cryptographic Algorithms</li> <li>PBQ: Identify Cryptographic Modes of Operation</li> <li>Review Activity: Cryptographic Algorithms</li> </ul>	<ul> <li>Video: Identifying Symmetric Cryptographic Algorithms</li> <li>Review Activity: Cryptographic Algorithms</li> </ul>	
Topic 3B: Public Key Infrastructure <i>Exam objectives</i> <i>covered: 1.4 Explain</i> <i>the importance of</i> <i>using appropriate</i> <i>cryptographic</i> <i>solutions.</i>	<ul> <li>PBQ: Implement Certificates and Certificate Authorities</li> <li>Review Activity: Public Key Infrastructure</li> </ul>	Review Activity: Public Key Infrastructure	

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Topic 3C: Cryptographic Solutions <i>Exam objectives</i> <i>covered: 1.4 Explain</i> <i>the importance of</i> <i>using appropriate</i> <i>cryptographic</i> <i>solutions.</i>	Review Activity: Cryptographic Solutions	Review Activity: Cryptographic Solutions	
	Lesson 3: Practice     Questions	Lesson 3: Practice     Questions	<ul> <li>APPLIED Lab: Using Storage Encryption</li> <li>Assisted Lab: Using Hashing and Salting</li> </ul>
Lesson 4: Implement Identity and Access Management			
Topic 4A: Authentication <i>Exam objectives</i> covered: 4.6 Given a scenario, implement and maintain identity and access management.	<ul> <li>Video: Implementing IAM</li> <li>Review Activity: Authentication</li> </ul>	<ul> <li>Video: Implementing IAM</li> <li>Review Activity: Authentication</li> </ul>	
Topic 4B: Authorization <i>Exam objectives</i> covered: 4.6 Given a scenario, implement and maintain identity and access management.	<ul> <li>Video: Examining the Access Token</li> <li>Review Authorization</li> <li>PBQ: Implement an Access Control Model</li> </ul>	<ul> <li>Video: Examining the Access Token</li> <li>Review Activity: Authorization</li> </ul>	
Topic 4C: Identity Management Exam objectives covered: 4.6 Given a scenario, implement and maintain identity and access management	<ul> <li>Review Activity: Identity Management</li> </ul>	• Review Activity: Identity Management	
	Lesson 4: Practice     Questions	Lesson 4: Practice     Questions	<ul> <li>Assisted Lab: Managing Password Security</li> </ul>

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			<ul> <li>Assisted Lab: Managing Permissions</li> </ul>
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.	<ul> <li>Video: Configuring EAP and AAA Authentication Technologies</li> <li>Review Activity: Enterprise Network Architecture</li> </ul>	<ul> <li>Video: Configuring EAP and AAA Authentication Technologies</li> <li>Review Activity: Enterprise Network Architecture</li> </ul>	
3.2 Given a scenario, apply security principles to secure enterprise infrastructure. Topic 5B: Network	Video: Load	Video: Load Balancer	
Exam objectives covered: 3.2 Given a scenario, apply security principles to secure enterprise infrastructure.	<ul> <li>Video: Load Balancer Configuration</li> <li>Review Activity: Network Security Appliances</li> </ul>	<ul> <li>Video. Load Balancer</li> <li>Configuration</li> <li>Review Activity: Network Security Appliances</li> </ul>	
Topic 5C: Secure Communications <i>Exam objectives</i> <i>covered: 3.2 Given a</i> <i>scenario, apply</i> <i>security principles to</i> <i>secure enterprise</i> <i>infrastructure.</i>	<ul> <li>Video: Secure Remote Administration Protocols</li> <li>PBQ: Implement Secure Remote Access Protocols</li> <li>Review Activity: Secure Communications</li> </ul>	<ul> <li>Video: Secure Remote Administration Protocols</li> <li>Review Activity: Secure Communications</li> </ul>	
Lesson 6: Secure Cloud Network Architecture	Lesson 5: Practice     Questions	Lesson 5: Practice     Questions	<ul> <li>Assisted Lab: Setting up Remote Access</li> <li>Assisted Lab: Using TLS Tunneling</li> </ul>

/ Activity:	Student Guide eBook	CertMaster Labs
Infrastructure analyze ructure Types inctions	• Review Activity: Cloud Infrastructure	
v Activity: Ided Systems ero Trust ecture	Review Activity: Embedded Systems and Zero Trust Architecture	
n 6: Practice ons	Lesson 6: Practice     Questions	<ul> <li>Assisted Lab: Using Containers</li> <li>Assisted Lab: Using Virtualization</li> </ul>
Applying the nts of Asset gement Activity: Management	<ul> <li>Video: Applying the Elements of Asset Management Review Activity: Asset Management</li> </ul>	

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Topic 7B: Redundancy Strategies <i>Exam objectives</i> covered: 1.2 Summarize fundamental security concepts. 3.4 Explain the importance of resilience and recovery in security architecture.	<ul> <li>Video: Detect Malicious Network Traffic with a Honeypot</li> <li>PBQ: Incorporate Redundancy Strategies</li> <li>Review Activity: Redundancy Strategies</li> </ul>	<ul> <li>Video: Detect Malicious Network Traffic with a Honeypot</li> <li>Review Activity: Redundancy Strategies</li> </ul>	
Topic 7C: Physical Security <i>Exam objectives</i> <i>covered: 1.2</i> <i>Summarize</i> <i>fundamental security</i> <i>concepts.</i>	• Review Activity: Physical Security	• Review Activity: Physical Security	
	Lesson 7: Practice     Questions	Lesson 7: Practice     Questions	<ul> <li>Assisted Lab: Implement Backups</li> <li>Assisted Lab: Performing Drive Sanitization</li> </ul>
Lesson 8: Explain Vulnerability Management			
Topic 8A: Device and OS Vulnerabilities <i>Exam objectives</i> <i>covered: 2.3 Explain</i> <i>various types of</i> <i>vulnerabilities.</i>	<ul> <li>PBQ: Identify Types of Vulnerabilities</li> <li>Review Activity: Device and OS Vulnerabilities</li> </ul>	Review Activity: Device and OS Vulnerabilities	
Topic 8B: Application and Cloud Vulnerabilities <i>Exam objectives</i> <i>covered: 2.3 Explain</i>	<ul> <li>Video: Understand Various Types of Vulnerabilities</li> <li>Review Activity: Application and</li> </ul>	<ul> <li>Video: Understand Various Types of Vulnerabilities</li> <li>Review Activity: Application and Cloud Vulnerabilities</li> </ul>	

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various types of vulnerabilities.	Cloud Vulnerabilities		
Topic 8C: Vulnerability Identification Methods <i>Exam objectives</i> <i>covered: 4.3 Explain</i> <i>various activities</i> <i>associated with</i> <i>vulnerability</i> <i>management.</i>	<ul> <li>Video: Scanning a Network with Nessus</li> <li>Review Activity: Vulnerability Identification Methods</li> </ul>	<ul> <li>Video: Scanning a Network with Nessus</li> <li>Review Activity: Vulnerability Identification Methods</li> </ul>	
Topic 8D: Vulnerability Analysis and Remediation <i>Exam objectives</i> <i>covered: 4.3 Explain</i> <i>various activities</i> <i>associated with</i> <i>vulnerability</i> <i>management.</i>	Review Activity: Vulnerability Analysis and Remediation	Review Activity: Vulnerability Analysis and Remediation	
Lesson 9: Evaluate	Lesson 8: Practice     Questions	Lesson 8: Practice     Questions	<ul> <li>Assisted Lab: Exploiting and Detecting SQLi</li> <li>Assisted Lab: Working with Threat Feeds</li> <li>Assisted Lab: Performing Vulnerability Scans</li> </ul>
Network Security Capabilities			
Topic 9A: Network Security Baselines <i>Exam objectives</i> <i>covered: 4.1 Given a</i> <i>scenario, apply</i> <i>common security</i> <i>techniques to</i> <i>computing resources.</i>	<ul> <li>Review Activity: Network Security Baselines</li> <li>PBQ: Implement Secure Wireless Infrastructure</li> </ul>	Review Activity: Network Security Baselines	
4.5 Given a scenario, modify enterprise			

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capabilities to enhance			
security.			
Topic 9B: Network Security Capability Enhancement <i>Exam objectives</i> <i>covered: 4.5 Given a</i> <i>scenario, modify</i> <i>enterprise capabilities</i>	<ul> <li>Video: Configuring Application Control Software</li> <li>Review Activity: Network Security Capability Enhancement</li> </ul>	<ul> <li>Video: Configuring Application Control Software</li> <li>Review Activity: Network Security Capability Enhancement</li> </ul>	
to enhance security.			
	Lesson 9: Practice     Questions	Lesson 9: Practice     Questions	<ul> <li>Assisted Lab: Understanding Security Baselines</li> <li>APPLIED Lab: Implementing a Firewall</li> </ul>
Lesson 10: Assess Endpoint Security Capabilities			
Topic 10A: Implement	Video: Removing	Video: Removing	
Endpoint Security	Unnecessary	Unnecessary Services	
France a bia stirres	Services	Video: Hardening an	
Exam objectives covered: 2.5 Explain	• Video: Hardening an Operating System	<ul><li>Operating System</li><li>Review Activity:</li></ul>	
the purpose of	Review Activity:	Implement Endpoint	
mitigation techniques	Implement Endpoint	Security	
used to secure the enterprise.	Security		
4.1 Given a scenario,			
apply common			
security techniques to			
computing resources.			
4.5 Given a scenario, modify enterprise capabilities to enhance security.			
Topic 10B: Mobile	PBQ: Implement	Review Activity: Mobile	
Device Hardening	Mobile Device Management	Device Hardening	
Exam objectives	Review Activity:		
covered: 4.1 Given a	Mobile Device		
scenario, apply	Hardening		
common security			
techniques to	<u> </u>		

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computing resources.			
	Lesson 10: Practice     Questions	Lesson 10: Practice     Questions	<ul> <li>Assisted Lab: Using Group Policy</li> <li>APPLIED Lab: Hardening</li> </ul>
Lesson 11: Enhance Application Security Capabilities			
Topic 11A: Application Protocol Security Baselines <i>Exam objectives</i> covered: 4.5 Given a scenario, modify enterprise capabilities to enhance security.	<ul> <li>Video: Securing an Email Server</li> <li>PBQ: Modify Enterprise Capabilities to Enhance Security</li> <li>Review Activity: Application Protocol Security Baselines</li> </ul>	<ul> <li>Video: Securing an Email Server</li> <li>Review Activity: Application Protocol Security Baselines</li> </ul>	
Topic 11B: Cloud and Web Application Security Concepts <i>Exam objectives</i> <i>covered: 4.1 Given a</i> <i>scenario, apply</i> <i>common security</i> <i>techniques to</i> <i>computing resources.</i>	Review Activity: Cloud and Web Application Security Concepts	Review Activity: Cloud and Web Application Security Concepts	
	Lesson 11: Practice     Questions	Lesson 11: Practice     Questions	<ul> <li>Assisted Lab: Performing DNS Filtering</li> <li>Assisted Lab: Configuring System Monitoring</li> </ul>
Lesson 12: Explain Incident Response and Monitoring Concepts			
Topic 12A: Incident Response <i>Exam objectives</i> <i>covered: 4.8 Explain</i> <i>appropriate incident</i> <i>response activities.</i>	<ul> <li>PBQ: Summarize Incident Response Procedures</li> <li>Review Activity: Incident Response</li> </ul>	• Review Activity: Incident Response	

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Topic 12B: Digital Forensics <i>Exam objectives</i> <i>covered: 4.8 Explain</i> <i>appropriate incident</i> <i>response activities.</i>	<ul> <li>Video: Investigating Security Incidents</li> <li>Review Activity: Digital Forensics</li> <li>PBQ:</li> </ul>	<ul> <li>Video: Investigating Security Incidents</li> <li>Review Activity: Digital Forensics</li> </ul>	
Topic 12C: Data Sources <i>Exam objectives</i> <i>covered: 4.9 Given a</i> <i>scenario, use data</i> <i>sources to support an</i> <i>investigation.</i>	<ul> <li>Video: Analyzing Packets</li> <li>Review Activity: Data Sources</li> </ul>	<ul> <li>Video: Analyzing Packets</li> <li>Review Activity: Data Sources</li> </ul>	
Topic 12D: Alerting and Monitoring Tools Exam objectives covered: 4.4 Explain security alerting and monitoring concepts and tools.	<ul> <li>Video: Understand Security Alerting and Monitoring Concepts and Tools</li> <li>Review Activity: Alerting and Monitoring Tools</li> </ul>	<ul> <li>Video: Understand Security Alerting and Monitoring Concepts and Tools</li> <li>Review Activity: Alerting and Monitoring Tools</li> </ul>	
	Lesson 12: Practice Questions	Lesson 12: Practice     Questions	<ul> <li>APPLIED Lab: Incident Response: Detection</li> <li>APPLIED Lab: Performing Digital Forensics</li> <li>Assisted Lab: Performing Root Cause Analysis</li> <li>APPLIED Lab: Using Network Sniffers</li> </ul>
Lesson 13: Analyze Indicators of Malicious Activity			
Topic 13A: Malware Attack Indicators <i>Exam objectives</i> <i>covered: 2.4 Given a</i> <i>scenario, analyze</i> <i>indicators of malicious</i> <i>activity.</i>	<ul> <li>PBQ: Analyze Indicators of Malware-Based Attacks</li> <li>Review Activity: Malware Attack Indicators</li> </ul>	Review Activity: Malware Attack Indicators	
Topic 13B: Physical and Network Attack Indicators	<ul> <li>Video: Password Attacks</li> <li>Video: Implementing Secure Network Addressing Services</li> </ul>	<ul> <li>Video: Password Attacks</li> <li>Video: Implementing Secure Network Addressing Services</li> </ul>	

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Exam objectives	Review Activity:	Review Activity:	
covered: 2.4 Given a	Physical and	Physical and Network	
scenario, analyze	Network Attack	Attack Indicators	
indicators of malicious	Indicators		
activity.			
Topic 13C:	Review Activity:	Review Activity:	
Application Attack	Application Attack	Application Attack	
Indicators	Indicators	Indicators	
Evan objectives			
Exam objectives covered: 2.4 Given a			
scenario, analyze			
indicators of malicious			
activity.			
	Lesson 13: Practice	Lesson 13: Practice	Assisted Lab:
	Questions	Questions	Detecting and
	Questions	Questions	Responding to
			Malware
			• Assisted Lab:
			Understanding On-
			Path Attacks
Lesson 14:			
Summarize Security			
Governance			
Concepts			
Topic 14A: Policies,	PBQ: Apply	Review Activity:	
Standards, and	Appropriate Polices	Policies, Standards, and	
Procedures	and Regulations	Procedures	
Exam objectives	Review Activity:		
Exam objectives covered: 5.1	Policies, Standards,		
Summarize elements	and Procedures		
of effective security			
governance.			
Topic 14B: Change	• Video: Understand	• Video: Understand the	
Management	the Importance of	Importance of Change	
	Change	Management	
Exam objectives	Management	Processes	
covered: 1.3 Explain	Processes	Review Activity: Change	
the importance of	Review Activity:	Management	
change management	Change		
processes and the	Management		
impact to security.		)//	
Topic 14C:	Video: Understand	Video: Understand	
Automation and Orchestration	Automation and	Automation and	
	Orchestration for	Orchestration for	
Exam objectives	Secure Operations	Secure Operations	
covered: 4.7 Explain			
the importance of			
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automation and	Review Activity:	Review Activity:	
orchestration related	Automation and	Automation and	
to secure operations.	Orchestration	Orchestration	
	Lesson 14: Practice	Lesson 14: Practice	ADAPTIVE Lab: Using
	Questions	Questions	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	Review Activity: Risk	Review Activity: Risk	
Management	Management	Management	
Processes and	Processes and	Processes and	
Concepts	Concepts	Concepts	
Even objectives			
Exam objectives covered: 5.2 Explain			
elements of the risk			
management process.			
Topic 15B: Vendor	Review Activity:	Review Activity: Vendor	
Management	Vendor	Management Concepts	
Concepts	Management	Management Concepts	
	Concepts		
Exam objectives	Concepts		
covered: 5.3 Explain			
the processes			
associated with third-			
party risk assessment			
and management.			
Topic 15C: Audits and	Video: Exploring	Video: Exploring	
Assessments	Penetration Testing	Penetration Testing	
	Tools	Tools	
Exam objectives	Review Activity:	Review Activity: Audits	
covered: 5.5 Explain	Audits and	and Assessments	
types and purposes of	Assessments		
audits and			
assessments.	Lesson 15: Practice	Lesson 15: Practice	Assisted Lab:
	Questions	Questions	Assisted Lab.     Performing
	Questions	Questions	Reconnaissance
			Assisted Lab:
			Performing
			Penetration Testing
Lesson 16:			0
Summarize Data			
Protection and			
Compliance			

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Concepts			
Topic 16A: DataClassification andComplianceExam objectivescovered: 3.3 Compareand contrast conceptsand strategies toprotect data.5.4 Summarizeelements of effectivesecurity compliance.	<ul> <li>Video: Understand Effective Security Compliance</li> <li>PBQ: Explain Privacy and Data Sensitivity Concepts</li> <li>PBQ: Apply Appropriate Techniques to Secure Data</li> <li>Review Activity: Data Classification and Compliance</li> </ul>	<ul> <li>Video: Understand Effective Security Compliance</li> <li>Review Activity: Data Classification and Compliance</li> </ul>	
Topic 16B: Personnel Policies	Compliance		
Exam objectives covered: 5.6 Given a scenario, implement security awareness practices.			
	Lesson 16: Practice Questions	Lesson 16: Practice Questions	<ul> <li>Assisted Lab: Training and Awareness through Simulation</li> <li>Challenge Lab: Network Incident Investigation and Remediation</li> </ul>
	Final Assessment	Final Assessment	
	<ul> <li>Strengths and Weaknesses Dashboard</li> <li>Flashcards</li> <li>Game Center</li> </ul>	<ul> <li>Strengths and Weaknesses Dashboard</li> </ul>	
Student Resources	<ul> <li>Mapping Course Content to CompTIA Security+ SY0-701 (pdf)</li> </ul>	<ul> <li>Mapping Course Content to CompTIA Security+ SY0-701 (pdf)</li> </ul>	
Instructor Resources	<ul> <li>Presentation Planner for Security+ SY0-701 (xlsx)</li> <li>Transition Guide for Official CompTIA Security+ Exam SY0- 601 to Official CompTIA Security+ SY0-701 (pdf)</li> </ul>	<ul> <li>Presentation Planner for Security+ SY0-701 (xlsx)</li> <li>Transition Guide for Official CompTIA Security+ Exam SY0- 601 to Official CompTIA Security+ SY0-701 (pdf)</li> <li>Onboarding Guide for Official CompTIA</li> </ul>	

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	<ul> <li>Onboarding Guide for Official CompTIA Security+ SY0-701 Content (pdf)</li> <li>Mapping Course Content to CompTIA Security+ SY0-701 (pdf)</li> <li>Instructor PowerPoint Presentations for Security+ SY0-701 (zip)</li> </ul>	<ul> <li>Security+ SY0-701 Content (pdf)</li> <li>Mapping Course Content to CompTIA Security+ SY0-701 (pdf)</li> <li>Instructor PowerPoint Presentations for Security+ SY0-701 (zip)</li> </ul>	