## **COMPLIANCE STANDARDS**

**UPDATED JUNE 2025** 



**COURSE TITLE** 

CWE OWASP NIST\* PCI ISO NERC HIPAA GDPR MITRE

COURSE TITLE	CWE	OWASP	NIST*	PCI	ISO	NERC	HIPAA	GDPR	MITR
SECURITY PRINCIPLES									
AWA 101. Fundamentals of Application Security	✓	<b>√</b>		<b>√</b>			<b>√</b>	<b>√</b>	
AWA 102. Secure Software Concepts	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>		<b>√</b>	
AWA 106. Building Secure Software: Overcoming Challenges in Application Security	<b>√</b>	<b>√</b>							
AWA 107. Building Secure Software: Foundations and Best Practices	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>			
AWA 108. Building Secure Software: A Guide to Software Integration, Testing, and Deployment	✓		✓	<b>√</b>	<b>√</b>	<b>√</b>			
ENG 110. Essential Account Management Security			✓						
ENG 111. Essential Session Management Security			✓						
ENG 112. Essential Access Controls for Mobile Devices			✓						
ENG 113. Essential Secure Configuration Management			<b>√</b>						
ENG 114. Essential Risk Assessment			✓					<b>√</b>	
ENG 115. Essential System and Information Integrity			<b>√</b>						
ENG 116. Essential Security Planning Policy and Procedures			✓						
ENG 117. Essential Information Security Program Planning			✓						
ENG 118. Essential Incident Response			✓						
ENG 119. Essential Security Audit and Accountability			✓						
ENG 120. Essential Personnel Security Policy and Procedures			<b>√</b>						
ENG 121. Essential Identification and Authentication			<b>√</b>						
ENG 122. Essential Physical and Environmental Protection			<b>√</b>						
ENG 123. Essential Secure Software Engineering Principles			<b>√</b>						
ENG 124. Essential Application Protection			<b>√</b>						
ENG 125. Essential Data Protection			<b>√</b>					<b>√</b>	
ENG 126. Essential Security Maintenance Policies			<b>√</b>						
ENG 127. Essential Media Protection			<b>√</b>						
ENG 150. Meeting Confidentiality, Integrity and Availability Requirements				<b>√</b>				<b>√</b>	
ENG 151. Fundamentals of Privacy Protection		1	1					<b>√</b>	

SECURE DEVELOPMENT					
API 210. Mitigating APIs Lack of Resources & Rate Limiting	✓	✓			
API 211. Mitigating APIs Broken Object Level Authorization	<b>✓</b>	✓			

SECURE DEVELOPMENT (Continued)									
API 213. Mitigating APIs Mass Assignment		✓	✓						
API 214. Mitigating APIs Improper Asset Management		<b>√</b>	<b>√</b>						
API 351. Securing Kubernetes in the Build and Release Stage		<b>√</b>	<b>√</b>						
COD 110. Fundamentals Secure Mobile Development	<b>✓</b>	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>		<b>√</b>	
COD 141. Fundamentals of Database Security				<b>√</b>				<b>√</b>	
COD 152. Fundamentals of Secure Cloud Development	<b>✓</b>	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
COD 160. Fundamentals of Secure Embedded Software Development			<b>√</b>	1	<b>√</b>	<b>√</b>		<b>√</b>	✓
COD 170. Identifying Threats to Mainframe COBOL Applications and Data	<b>✓</b>	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>			
COD 201. Secure C Encrypted Network Communications	<b>✓</b>	<b>√</b>	<b>√</b>	1					
COD 202. Secure C Run-Time Protection	<b>✓</b>		<b>√</b>						
COD 206. Creating Secure C++ Code	<b>✓</b>	<b>√</b>							
COD 207. Communication Security in C++	<b>✓</b>	<b>√</b>	<b>√</b>	1					
COD 214. Creating Secure GO Applications	<b>✓</b>	<b>√</b>							
COD 215. Mitigating .NET Application Vulnerabilities (NEW)		<b>√</b>	<b>√</b>	1					
COD 219. Creating Secure Code SAP ABAP Foundations	<b>✓</b>	<b>√</b>		<b>√</b>					
COD 241. Creating Secure Oracle Database Applications	<b>✓</b>	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
COD 242. Creating Secure SQL Server and Azure SQL Database Applications								<b>√</b>	
COD 245. Securing NoSQL Cloud Databases	<b>✓</b>	<b>√</b>	<b>√</b>						✓
COD 246. PCI DSS Requirement 3: Protecting Stored Cardholder Data	<b>✓</b>	<b>√</b>							
COD 247. PCI DSS Requirement 3: Encrypting Transmission of Cardholder Data	<b>✓</b>	<b>√</b>							
COD 248. PCI DSS Requirement 6: Develop & Maintain Secure Systems & Applications	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>			
COD 249. PCI DSS Requirement 11: Regularly Test Security Systems and Processes			<b>√</b>	1	<b>√</b>	<b>√</b>			
COD 251. Defending AJAX-Enabled Web Applications	<b>✓</b>	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>		<b>√</b>	
COD 252. Securing Google Platforms Applications & Data	<b>✓</b>	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>		<b>√</b>	
COD 253. Creating Secure AWS Cloud Applications	<b>✓</b>	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>		<b>√</b>	
COD 254. Creating Secure Azure Applications	<b>✓</b>	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
COD 255. Creating Secure Code Web API Foundations	<b>✓</b>	✓	<b>√</b>		<b>√</b>	<b>√</b>			
COD 256. Creating Secure Code Ruby on Rails Foundations	<b>✓</b>	✓	<b>√</b>		✓	<b>√</b>			
COD 257. Creating Secure Python Web Applications	<b>✓</b>	✓	<b>√</b>	<b>√</b>	✓	<b>√</b>			
COD 258. Creating Secure PHP Web Applications		✓	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>			
COD 259. Node.js Threats and Vulnerabilities	<b>✓</b>	<b>√</b>							
COD 261. Threats to Scripts	<b>√</b>	✓		<b>√</b>					

SECURE DEVELOPMENT (Continued)									
COD 262. Fundamentals of Shell and Interpreted Language Security	<b>√</b>	<b>√</b>		<b>√</b>					
COD 263. Secure Bash Scripting	<b>✓</b>	<b>√</b>		<b>√</b>					
COD 264. Secure Perl Scripting	<b>✓</b>	<b>√</b>		<b>√</b>					
COD 265. Secure Python Scripting	✓	<b>√</b>		<b>√</b>					
COD 266. Secure Ruby Scripting	✓	<b>√</b>		<b>√</b>					
COD 267. Securing Python Microservices	✓	<b>√</b>							
COD 268. Mitigating TypeScript Application Vulnerabilities		<b>√</b>	<b>√</b>	<b>√</b>					
COD 270. Creating Secure COBOL and Mainframe Applications	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>			
COD 283. Java Cryptography		<b>√</b>	<b>√</b>						
COD 284. Secure Java Coding	✓	<b>√</b>	<b>√</b>		<b>√</b>	✓	<b>√</b>	<b>√</b>	
COD 285. Developing Secure Angular Applications		<b>√</b>		<b>√</b>					
COD 286. Creating Secure React User Interfaces		<b>√</b>		<b>√</b>					
COD 287. Java Application Server Hardening	✓	<b>√</b>	<b>√</b>	<b>√</b>					
COD 288. Java Public Key Cryptogrpahy		<b>√</b>	<b>√</b>						
COD 289. Securing Java Spring APIs	✓	<b>√</b>							✓
COD 301. Secure C Buffer Overflow Mitigations	✓	<b>√</b>							
COD 302. Secure C Memory Management	✓			<b>√</b>					✓
COD 304. Principles of C++ Memory Safety		<b>√</b>	<b>√</b>	<b>√</b>					
COD 305. C++ Secure Memory Management		<b>√</b>	✓	<b>√</b>					
COD 306. C++ Memory Safety: Debugging Tools and Techniques		<b>√</b>	<b>√</b>	<b>√</b>					
COD 303. Common C Vulnerabilities and Attacks	✓		<b>√</b>						
COD 307. Protecting Data in C++	✓	<b>√</b>							
COD 308. Common ASP.NET Vulnerabilities and Attacks	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>		
COD 309. Securing ASP.NET MVC Applications	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>		
COD 310- Securing ASP.NET Core Applications	✓	<b>√</b>	<b>√</b>						✓
COD 315. Preventing Vulnerabilities in iOS Code in Swift	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>			
COD 316. Creating Secure iOS Code in Objective C	✓	<b>√</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
COD 317. Protecting Data on iOS in Swift	<b>√</b>	<b>√</b>	✓	<b>√</b>	✓	<b>√</b>			
COD 318. Protecting Data on Android in Java		<b>√</b>	✓	<b>√</b>	✓	✓		✓	
COD 319. Preventing Vulnerabilities in Android Code in Java		<b>√</b>	<b>√</b>	<b>√</b>	✓	✓			
COD 321. Protecting C# from Integer Overflows and Canonicalization Issues	<b>√</b>	<b>√</b>	<b>√</b>	✓	✓	✓	<b>√</b>	✓	
COD 322. Protecting C# from SQL Injection	✓	✓	✓	✓	✓	✓	<b>√</b>	✓	

SECURE DEVELOPMENT (Continued)									
COD 323. Using Encryption with C#	✓	✓	✓	<b>√</b>	<b>√</b>	✓	✓	<b>√</b>	
COD 324. Protecting C# from XML Injection	✓	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
COD 325. Protecting Data in C# for .NET	✓	<b>√</b>	✓						✓
COD 352. Creating Secure JavaScript and jQuery Code	✓	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>			
COD 361. HTML5 Security Threats	✓	✓	✓	<b>√</b>	✓	<b>√</b>			
COD 362. HTML5 Built-In Security Features	✓	<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>			
COD 363. Securing HTML5 Data	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>			
COD 364. Securing HTML5 Connectivity	1	✓	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>			
COD 366. Creating Secure Kotlin Applications		<b>√</b>		<b>√</b>					
COD 380. Preventing SQL Injection in Java	1	✓	<b>√</b>						
COD 381. Preventing Path Traversal Attacks in Java	1	<b>√</b>	<b>√</b>						
COD 382. Protecting Data in Java	1	✓							
COD 383. Protecting Java Backend Services	✓	<b>√</b>	<b>√</b>	1					
COD 384. Protecting Java from Information Disclosure	✓	<b>√</b>	<b>√</b>						
COD 385. Preventing Race Conditions in Java Code	✓	<b>√</b>	<b>√</b>						
COD 386. Preventing Integer Overflows in Java Code	✓	<b>√</b>	<b>√</b>						
DES 207. Mitigating OWASP API Security Top 10		<b>√</b>	<b>√</b>						
DES 208. Defending Against the CSA Top 11 Threats to Cloud			<b>√</b>						
DES 232. Mitigating OWASP 2021 Injection	<b>√</b>	✓	<b>√</b>	<b>√</b>					
DES 233. Mitigating OWASP 2021 Identification and Authentication Failures	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>					
DES 234. Mitigating OWASP 2021 Cryptographic Failures	1	<b>√</b>	<b>√</b>	<b>√</b>				<b>✓</b>	
DES 235. Mitigating OWASP 2021 Insecure Design	✓	<b>√</b>	<b>√</b>						
DES 236. Mitigating OWASP 2021 Broken Access Control	1	<b>√</b>	<b>√</b>	<b>√</b>					
DES 237. Mitigating OWASP 2021 Security Misconfiguration	1	<b>√</b>	<b>√</b>	<b>√</b>					
DES 238. Mitigating OWASP 2021 Server-Side Request Forgery (SSRF)	1	<b>√</b>	<b>√</b>						
DES 239. Mitigating OWASP 2021 Software and Data Integrity Failures		<b>√</b>							
DES 240. Mitigating OWASP 2021 Vulnerable and Outdated Components		<b>√</b>	<b>√</b>	1					
DES 241. Mitigating OWASP 2021 Security Logging and Monitoring Failures		<b>√</b>	✓	<b>√</b>					
DES 250. Secure Software Acceptance and Deployment			✓						
DES 270. Mitigating OWASP Mobile Top 10 Risks	<b>√</b>	<b>√</b>	✓						✓
DES 271. OWASP M1: Mitigating Improper Platform Usage		<b>√</b>							
DES 272. OWASP M2: Mitigating Insecure Data Storage		<b>√</b>							

SECURE DEVELOPMENT (Continued)				
DES 273. OWASP M3: Mitigating Insecure Communication	✓			
DES 274. OWASP M4: Mitigating Insecure Authentication	✓			
DES 275. OWASP M5: Mitigating Insufficient Cryptography	✓			
DES 276. OWASP M6: Mitigating Insecure Authorization	✓			
DES 277. OWASP M7: Mitigating Client Code Quality	✓			
DES 278. OWASP M8: Mitigating Code Tampering	✓			
DES 279. OWASP M9: Mitigating Reverse Engineering	✓			
DES 280. OWASP M10: Mitigating Extraneous Functionailty	✓			
DES 281. OWASP IoT1: Mitigating Weak, Guessable or Hardcoded Passwords	✓			
DES 282. OWASP IoT2: Mitigating Insecure Network Services	✓			
DES 283. OWASP IoT3: Mitigating Insecure Ecosystem Interfaces	✓			
DES 284. OWASP IoT4: Mitigating Lack of Secure Update Mechanism	✓			
DES 285. OWASP IoT5: Mitigating Use of Insecure or Outdated Components	✓			
DES 286. OWASP IoT6: Mitigating Insufficient Privacy Protection	✓			
DES 287. OWASP IoT7: Mitigating Insecure Data Transfer and Storage	✓			✓
DES 288. OWASP IoT8: Mitigating Lack of Device Management	✓			
DES 289. OWASP IoT9: Mitigating Insecure Default Settings	✓			
DES 290. OWASP IoT10: Mitigating Lack of Physical Hardening	✓			
DES 361. Mitigating LCNC (Low-Code/No-Code) Account Impersonation	✓	✓		
DES 362. Mitigating LCNC (Low-Code/No-Code)) Authorization Misuse	✓	✓		
DES 364. Mitigating LCNC Authentication and Secure Communication Failures	✓	✓		
DES 283. OWASP IoT3: Mitigating Insecure Ecosystem Interfaces	✓			
DES 284. OWASP IoT4: Mitigating Lack of Secure Update Mechanism	✓			
DES 285. OWASP IoT5: Mitigating Use of Insecure or Outdated Components	✓			
DES 286. OWASP IoT6: Mitigating Insufficient Privacy Protection	✓			
DES 287. OWASP IoT7: Mitigating Insecure Data Transfer and Storage	✓			✓
DES 288. OWASP IoT8: Mitigating Lack of Device Management	<b>✓</b>			
DES 289. OWASP IoT9: Mitigating Insecure Default Settings	<b>✓</b>			
DES 290. OWASP IoT10: Mitigating Lack of Physical Hardening	<b>✓</b>			
DES 361. Mitigating LCNC (Low-Code/No-Code) Account Impersonation	✓	<b>✓</b>		
DES 362. Mitigating LCNC (Low-Code/No-Code)) Authorization Misuse	✓	✓		
DES 364. Mitigating LCNC Authentication and Secure Communication Failures	<b>√</b>	<b>√</b>		

SECURE DESIGN								
CYB 210. Cybersecurity Incident Response			<b>√</b>					
CYB 211. Identifying and Protecting Assets Against Ransonmware			<b>√</b>					
CYB 212. Fundamentals of Security Information & Event Management (SIEM)			<b>√</b>					
DES 101. Fundamentals of Secure Architecture			<b>√</b>	<b>√</b>	<b>√</b>			<b>✓</b>
DES 151. Fundamentals of the PCI Secure SLC Standard	<b>√</b>		<b>√</b>	<b>√</b>				
DES 202. Cryptographic Suite Services: Encoding, Encrypting and Hashing	<b>√</b>	<b>✓</b>						
DES 203. Cryptographic Components: Randomness, Algorithms, & Key Management	<b>√</b>	<b>✓</b>						
DES 204. The Role of Cryptography in Application Development	<b>√</b>	<b>✓</b>						
DES 205. Message Integrity Crytographic Functions	<b>√</b>	<b>✓</b>						
DES 206. Meeting Cloud Governance and Compliance Requirements			<b>√</b>					
DES 209. Authentication and Lifecycle Management			<b>√</b>					
DES 255. Securing the IoT Update Process		<b>√</b>	<b>√</b>					
DES 262. Securing Enterprise Low-Code Application Platforms			<b>√</b>					
DES 305. Blockchain Security - Protecting Existing Blockchain Assets	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>				<b>✓</b>
DES 311. Creating Secure Application Architecture			<b>√</b>	<b>√</b>		<b>√</b>		<b>✓</b>
DES 312. Protecting Cardholder Data				<b>√</b>				
DES 313. Hardening a Kubernetes Cluster			<b>√</b>					
ENG 191. Introduction to the Microsoft SDL			<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>		
ENG 192. Implementing the MS SDL Optimization Model			<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>		<b>√</b>
ENG 193. Implementing the Agile MS SDL			<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>		<b>√</b>
ENG 194. Implementing MS SDL Line of Business			<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>		<b>✓</b>
ENG 195. Implementing the MS SDL Threat Modeling Tool			<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>		<b>✓</b>
ENG 205. Fundamentals of Threat Modeling								<b>✓</b>
ENG 211. How to Create Application Security Design Requirements		<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>
ENG 212. Implementing Secure Software Operatiions	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>				
ENG 251. Risk Management Foundations			<b>√</b>					
ENG 311. Attack Surface Analysis and Reduction		<b>√</b>		<b>√</b>				<b>√</b>
ENG 312. How to Perform a Security Code Review	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>				
<b>ENG 320.</b> Using Software Composition Analysis to Secure Open-Source Components	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>				
ENG 351. Preparing the Risk Management Framework			<b>√</b>					
<b>ENG 352.</b> Categorizing Systems and Information within the RMF			<b>√</b>	<b>√</b>				<b>✓</b>
<b>ENG 353.</b> Selecting, Implementing, and Assessing Controls within the RMF		<b>√</b>	<b>✓</b>	<b>√</b>				<b>✓</b>

SECURE DESIGN (Continued)						
ENG 354. Authorizing and Monitoring System Controls within the RMF	<b>✓</b>	<b>√</b>	<b>✓</b>		<b>√</b>	

INFRASTRUCTURE SECURITY									
API 250. Controlling Access to the Kubernetes API		<b>√</b>	✓						
API 251. Implementing Web Application and API Protection (WAAP)		<b>√</b>	<b>√</b>						
CYB 251. Securing the AI/ML Infrastructure			<b>√</b>						<b>√</b>
DES 210. Hardening Linux/Unix Systems	<b>√</b>	<b>√</b>	<b>√</b>	1				<b>√</b>	<b>√</b>
DES 212. Architecture Risk Analysis and Remediation		<b>√</b>	<b>√</b>	1	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
DES 214. Securing Infrastructure Architecture			<b>√</b>	<b>√</b>					
DES 215. Defending Infrastructure			<b>√</b>	1	1	<b>√</b>	<b>√</b>	<b>√</b>	
DES 216. Protecting Cloud Infrastructure			<b>√</b>	1	1	<b>√</b>	<b>√</b>	<b>√</b>	
DES 217. Securing Terraform Infrastructure and Resources			<b>√</b>						
DES 218. Protecting Microservices, Containers, and Orchestration			<b>√</b>					<b>√</b>	
DES 219. Securing Google's Firebase Platform			<b>√</b>		1				
DES 260. Fundamentals of IoT Architecture and Design	✓	<b>√</b>	<b>√</b>	1	1	<b>√</b>	<b>√</b>	<b>√</b>	
DES 261. Securing Serverless Environments		<b>√</b>	<b>√</b>						
<b>DES 306.</b> Creating a Secure Blockchain Network	✓	<b>√</b>	<b>√</b>	1				<b>√</b>	
<b>DES 314.</b> Hardening the Docker Engine			<b>√</b>						
ICS 210. ICS/SCADA Security Essentials			<b>√</b>						
ICS 310. Protecting Information and System Integrity in Industrial Control System Environments			<b>√</b>						

DevSecOps							
CYB 213. Generative AI Privacy & Cybersecurity Risk		<b>√</b>	<b>√</b>			<b>✓</b>	
CYB 310. Using Cyber Supply Chain Risk Management to Mitigate Threats to IT/OT			<b>√</b>				
CYB 311. Threat Analysis with Artificial Intelligence			<b>√</b>				
DSO 201. Fundamentals of Secure DevOps			<b>√</b>	<b>✓</b>			
DSO 205. Securing the COTS Supply Chain	<b>√</b>	<b>√</b>	<b>√</b>				
DSO 206. Securing the Open Source Software Supply Chain		<b>√</b>	<b>√</b>				
DSO 211. Identifying Threats to Containers and Data in a DevSecOps Framework	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>			
DSO 212. Fundamentals of Zero Trust Security			<b>√</b>				
DSO 253. DevSecOps in the AWS Cloud		<b>√</b>	<b>√</b>			<b>√</b>	
DSO 254. DevSecOps in the Azure Cloud		<b>√</b>	<b>√</b>			<b>√</b>	

DevSecOps (Continued)							
DSO 256. DevSecOps in the Google Cloud Platform		<b>√</b>	<b>√</b>			<b>√</b>	
DSO 301. Orchestrating Secure System and Service Configuration		<b>√</b>	<b>√</b>	1			
DSO 302. Automated Security Testing			<b>√</b>	1			
DSO 303. Automating Security Updates	<b>√</b>		<b>√</b>	1			
DSO 304. Securing API Gateways in a DevSecOps Framework	<b>√</b>	<b>√</b>	<b>√</b>				
DSO 305. Automating CI/CD Pipeline Compliance		<b>√</b>	<b>√</b>			<b>√</b>	
DSO 306. Implementing Infrastructure as Code			<b>√</b>				
DSO 307. Secure Secrets Management			<b>/</b>	1			

SECURITY TESTING									
ATK 201. Fundamentals of Security Testing			✓	<b>√</b>					✓
CYB 250. Cyber Threat Hunting: Tactics, Techniques, and Procedures (TTP)			✓						✓
CYB 301. Fundamentals of Ethical Hacking			✓	<b>√</b>					✓
SDT 301. Testing for Injection	<b>√</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>	
SDT 302. Testing for Identification and Authentication Failures	1	<b>√</b>	✓	1	✓	✓	✓	✓	
SDT 303. Testing for Cryptographic Failures	1	<b>√</b>	✓	<b>√</b>	✓	✓	<b>√</b>	<b>√</b>	
SDT 304. Testing for Insecure Design	<b>√</b>	<b>√</b>	✓	1	✓	✓	<b>√</b>	✓	
SDT 305. Testing for Broken Access Control	<b>√</b>	<b>√</b>	✓	1	<b>√</b>	✓	<b>√</b>	<b>√</b>	
SDT 306. Testing for Security Miscconfiguration	<b>√</b>	<b>√</b>	✓	1	<b>√</b>	✓	<b>√</b>	✓	
SDT 307. Testing for Server-Side Request Forgery	<b>√</b>	<b>√</b>	✓	1	<b>√</b>	✓	<b>√</b>	✓	
SDT 308. Testing for Software and Data Integrity Failures	<b>√</b>	<b>√</b>	✓	1	<b>√</b>	✓	<b>√</b>	✓	
SDT 309. Testing for Vulnerable and Outdate Components	<b>√</b>	<b>√</b>	✓	1	<b>√</b>	✓	<b>√</b>	✓	
SDT 310. Testing for Security Logging and Monitoring Failures		<b>√</b>	✓	1	<b>√</b>	✓	<b>√</b>	✓	
SDT 311. Testing for Integer Overflow or Wraparound	<b>√</b>	<b>√</b>	✓	1					
SDT 312. Testing for Path Traversal	<b>√</b>								
SDT 313. Testing for Cross Site Request Forgery	<b>√</b>								
SDT 314. Testing for Unrestricted Upload of File with Dangerous Type	<b>√</b>	<b>√</b>							
SDT 315. Testing for Incorrect Permission Assignment for Critical Resource	<b>√</b>	<b>√</b>							
SDT 316. Testing for Use of Hard-Coded Credentials	<b>√</b>								
SDT 317. Testing for Improper Control of Generation of Code ("Code Injection")	1	<b>√</b>		<b>√</b>					
SDT 318. Testing for Insufficiently Protected Credentials	<b>√</b>	<b>√</b>		1					
SDT 319. Testing for Out-of-bound Read	1	<b>√</b>		1					

SECURITY TESTING (Continued)								
SDT 320. Testing for Out-of-bounds Write	<b>√</b>	✓		<b>√</b>				
SDT 321. Testing for Uncontrolled Resource Consumption	✓	<b>√</b>		<b>√</b>				
SDT 322. Testing for Improper Privilege Management	✓	$\checkmark$		1				
SDT 323. Testing for Improper Input Validation	<b>√</b>	<b>√</b>		<b>√</b>				
<b>SDT 324.</b> Testing for Improper Restriction of Operations within the Bounds of a Memory Buffer	✓	<b>√</b>		<b>√</b>				
SDT 325. Testing for NULL Pointer Dereference	<b>√</b>	✓		<b>√</b>				
SDT 326. Testing for Use After Free	✓	<b>√</b>		<b>√</b>				
TST 101. Fundamentals of Security Testing	✓	✓	<b>√</b>	✓	✓	✓		
TST 202. Penetration Testing Fundamentals			<b>√</b>	<b>√</b>				
TST 205. Performing Vulnerability Scans	✓		✓					
TST 206. ASVS Requirements for Developers		$\checkmark$		1				
TST 301. Infrastructure Penetration Testing	✓		<b>√</b>	<b>√</b>			✓	
TST 302. Application Penetration Testing	✓		✓	<b>√</b>			✓	
TST 303. Penetration Testing for Google Cloud Platform			✓					
TST 304. Penetration Testing for AWS Cloud			✓					
TST 305. Penetration Testing for Azure Cloud			✓					
TST 351. Penetration Testing for TLS Vulnerabilities	✓	<b>√</b>	✓					
TST 352. Penetration Testing for Injection Vulnerabilities	✓	<b>√</b>	✓					
TST 353. Penetration Testing for SQL Injection		<b>√</b>						
TST 354. Penetration Testing for Memory Corruption Vulnerabilities	<b>√</b>		✓					
TST 355. Penetration Testing for Authorization Vulnerabilities	✓	<b>√</b>	1					
TST 356. Penetration Testing for XSS	1	<b>√</b>						
TST 357. Penetration Testing for Hardcoded Secrets	✓		1					
TST 358. Penetration Testing Wireless Networks	✓		1					
TST 359. Penetration Testing Network Infrastructure	<b>√</b>		<b>√</b>					
TST 360. Penetration Testing for Authentication Vulnerabilities	<b>√</b>		<b>√</b>					

LEARN LABS						
LAB 111. Identifying Server-Side Request Forgery	✓	<b>√</b>	✓			✓
LAB 113. Identifying Cryptographic Failures	✓	✓	✓			✓
LAB 114. Identifying Cookie Tampering	✓	✓	✓			✓
LAB 115. Identifying Reflective Cross-Site Scripting (XSS)	✓	<b>√</b>	✓			✓

LEARN LABS (Continued)						
LAB 116. Identifying Forceful Browsing	✓	✓	✓		•	/
LAB 117. Identifying Hidden Form Field	✓	✓	✓			/
LAB 118. Identifying Weak File Upload Validation	✓	✓	✓			/
LAB 119. Identifying Persistent Cross-Site Scripting (XSS)	✓	✓	✓			/
LAB 120. Identifying XML Injection	✓	✓	✓			/
LAB 121. Identifying Vulnerable and Outdated Components		✓	✓			/
LAB 122. Identifying Insecure APIs		✓	✓			/
LAB 123. Identifying Vertical Privilege Escalation		✓	✓			/
LAB 124. Identifying Horizontal Privilege Escalation	✓	✓	✓			/
LAB 125. Identifying Buffer Overflow	✓	✓	✓			/
LAB 126. Identifying Information Leakage	✓	✓	✓			/
LAB 127. Identifying Security Logging and Monitoring Failures	✓	✓				
LAB 128. Identifying Unverified Password Change	✓	✓				
LAB 129. Identifying Error Message Containing Sensitive Information	✓	✓				
LAB 130. Identifying Generation of Predictable Numbers or Identifiers	✓	✓				
LAB 131. Identifying Improper Restriction of XML External Entity Reference	✓	✓				/
LAB 132. Identifying Exposed Services					•	/
LAB 133. Identifying Exposure of Sensitive Information Through Environmental Variables	✓	✓	✓			/
LAB 134. Identifying Plaintext Storage of a Password	✓	✓	✓			/
LAB 135. Identifying URL Redirection to Untrusted Site	✓	✓	✓			/
LAB 136. Identifying Improper Neutralization of Script in Attributes in a Web Page	✓	✓	✓			/
LAB 137. Identifying Improper Authorization	1	✓	✓		•	/
LAB 138. Identifying Authorization Bypass Through User-Controlled Key	✓	✓	✓			
LAB 139. Identifying Use of a Key Past its Expiration Date	✓	✓	✓		•	/

SKILL LABS					
LAB 201. Defending Java Applications Against Canonicalization	<b>✓</b>	✓			
LAB 202. Defending Python Applications Against Canonicalization	✓	✓			
LAB 203. Defending C# Applications Against Canonicalization	✓	✓			
LAB 204. Defending Node.js Applications Against Canonicalization	✓	✓			
LAB 205. Defending Java Applications Against XPath Injection	•	/ /			
LAB 206. Defending Python Applications Against XPath Injection	<b>√</b>	/ /			

SKILL LABS (Continued)					
LAB 207. Defending Node.js Applications Against XPath Injection		✓	✓		
LAB 208. Defending C# Applications Against XPath Injection		✓	✓		
LAB 211. Defending Java Applications Against Credentials in Code Medium	✓	✓	✓		✓
LAB 212. Defending Python Applications Against Credentials in Code Medium	✓	✓	✓		✓
LAB 213. Defending Node.js Applications Against Credentials in Code Medium	✓	✓	✓		✓
LAB 214. Defending C# Applications Against Credentials in Code Medium	✓	✓	✓		✓
LAB 215. Defending Java Applications Against Business Logic Error for Input Validation	✓	✓	✓		✓
LAB 216. Defending Python Applications Against Business Logic Error for Input Validation	✓	✓	<b>√</b>		<b>√</b>
LAB 217. Defending Node.js Applications Against Business Logic Error for Input Validation	✓	✓	✓		✓
LAB 218. Defending C# Applications Against Business Logic Error for Input Validation	✓	✓	✓		✓
LAB 220. Defending Against Hard-Coded Secrets (HTML5)	✓	✓			
LAB 221. Defending C# Against SQL Injection	✓	✓	✓		
LAB 224. Defending Java Applications Against Forceful Browsing	✓	✓	✓		✓
LAB 225. Defending Python Applications Against Forceful Browsing	✓	✓	✓		✓
LAB 226. Defending Node.js Applications Against Forceful Browsing	✓	✓	✓		✓
LAB 227. Defending C# Applications Against Forceful Browsing	✓	✓	✓		✓
LAB 222. Defending Python Against SQL Injection	✓	✓	✓		
LAB 223. Defending Node.js Against SQL Injection	✓	✓	✓		
LAB 228. Defending Java Applications Against Weak AES ECB Mode Encryption	✓	✓			
LAB 229. Defending Java Applications Against Weak PRNG	✓	✓			
LAB 230. Defending Java Against Cross-Site Scripting (XSS)	✓	✓			
LAB 231. Defending Python Against Cross-Site Scripting (XSS)	✓	✓			
LAB 232. Defending C# Against Cross-Site Scripting (XSS)	✓	✓			
LAB 233. Defending Node.js Against Cross-Site Scripting (XSS)	✓	✓			
LAB 234. Defending Java Applications Against Parameter Tampering	✓	✓	✓		
LAB 235. Defending Java Applications Against Plaintext Password Storage	✓	✓	✓		
LAB 236. Defending Java Applications Against Sensitive Information in Error Messages	✓	✓			
LAB 237. Defending Java Against SQL Injection	✓	✓			
LAB 238. Defending C# Applications Against Weak AES ECB Mode Encryption	✓	<b>√</b>	✓		
LAB 239. Defending C# Applications Against Weak PRNG	✓	✓	✓		
LAB 240. Defending Java Against ExternalXML Entity Vulnerabilities	✓	✓	✓		

SKILL LABS (Continued)						
LAB 241. Defending C# Against ExternalXML Entity Vulnerabilities	✓	✓	✓			
LAB 242. Defending Node.js Against ExternalXML Entity Vulnerabilities	✓	✓	✓			
LAB 243. Defending Python Against ExternalXML Entity Vulnerabilities	✓	<b>√</b>	✓			
LAB 244. Defending Java Against Security Misconfiguration	✓	<b>√</b>	✓			
LAB 245. Defending Node.js Applications Against Plaintext Password Storage	✓	<b>√</b>	✓			
LAB 246. Defending Node.js Applications Against Weak AES ECB Mode Encryption	✓	<b>√</b>	✓			
LAB 247. Defending Node.js Applications Against Weak PRNG	1	✓	✓			
LAB 248. Defending Node.js Applications Against Parameter Tampering	1	✓	✓			
LAB 249. Defending Python Applications Against Plaintext Password Storage	✓	✓	✓			
LAB 250. Defending C# Applications Against Parameter Tampering	✓	✓	✓			
LAB 251. Defending C# Applications Against Plaintext Password Storage	✓	<b>√</b>	<b>√</b>			
LAB 252. Defending Python Applications Against Weak AES ECB Mode Encryption	✓	<b>√</b>	✓			
LAB 253. Defending Python Applications Against Weak PRNG	✓	<b>√</b>	✓			
LAB 254. Defending Python Applications Against Parameter Tampering	✓	<b>√</b>	<b>√</b>			
LAB 260. Defending C# Applications Against Sensitive Information in Error Messages	✓	<b>√</b>				
LAB 261. Defending Python Applications Against Sensitive Information in Error Messages	✓	<b>√</b>				
LAB 262. Defending Node.js Applications Against Sensitive Information in Error Messages	✓	<b>√</b>				
LAB 263. Defending Java Applications Against Sensitive Information in Log Files	✓	✓				
LAB 264. Defending Python Applications Against Sensitive Information in Log Files	✓	✓				
LAB 265. Defending Node.js Applications Against Sensitive Information in Log Files	✓	✓				
LAB 266. Defending C# Applications Against Sensitive Information in Log Files	✓	✓				
LAB 267. Defending Java Applications Against Deserialization of Untrusted Data	✓	✓				
LAB 268. Defending Python Applications Against Deserialization of Untrusted Data	✓	✓				
LAB 269. Defending Node.js Applications Against Deserialization of Untrusted Data	✓	<b>√</b>				
LAB 270. Defending C# Applications Against Deserialization of Untrusted Data	✓	<b>√</b>				
LAB 271. Defending Java Applications Against SSRF	✓	<b>√</b>				
LAB 272. Defending Python Applications Against SSRF	✓	<b>√</b>				
LAB 273. Defending Node.js Applications Against SSRF	✓	✓				
LAB 274. Defending C# Applications Against SSRF	✓	✓				
LAB 275. Defending Java Applications Against Command Injection	✓	✓	✓			
LAB 276. Defending Python Applications Against Command Injection	✓	✓	<b>√</b>			

SKILL LABS (Continued)					
LAB 277. Defending Node.js Applications Against Command Injection	✓	<b>√</b>	✓		
LAB 278. Defending C# Applications Against Command Injection	✓	✓	✓		
LAB 279. Defending Java Applications Against Dangerous File Upload	✓	✓	✓		
LAB 280. Defending Python Applications Against Dangerous File Upload	✓	✓	✓		
LAB 281. Defending Node.js Against Dangerous File Upload	✓	✓	✓		
LAB 282. Defending C# Applications Against Dangerous File Upload	✓	✓	✓		
LAB 283. Defending Java Applications Against RegEx DoS	✓	<b>√</b>	<b>√</b>		
LAB 284. Defending Python Applications Against RegEx DoS	✓	<b>√</b>	✓		
LAB 285. Defending Node.js Applications Against RegEx DoS	✓	<b>√</b>	✓		
LAB 286. Defending C# Applications Against RegEx DoS	✓	<b>√</b>	✓		
LAB 287. Defending Java Applications Against Null Pointer Dereference	✓	<b>√</b>	✓		
LAB 288. Defending C# Applications Against Null Pointer Dereference	✓	✓	✓		
LAB 289. Defending Java Applications Against Path Traversal	✓	<b>√</b>	✓		
LAB 290. Defending Python Applications Against Path Traversal	✓	<b>√</b>	✓		
LAB 291. Defending Node.js Applications Against Path Traversal	✓	<b>√</b>	✓		
LAB 292. Defending C# Applications Against Path Traversal	✓	✓	✓		
LAB 293. Defending Java Applications Against Integer Overflow	✓	✓	✓		
LAB 294. Defending C# Applications Against Integer Overflow	✓	✓	✓		
LAB 301. Defending Java Applications Against Open Redirect	✓	<b>√</b>			✓
LAB 302. Defending Python Applications Against Open Redirect	✓	<b>√</b>			✓
LAB 303. Defending C# Applications Against Open Redirect	✓	<b>√</b>			✓
LAB 304. Defending Node.js Applications Against Open Redirect	✓	✓			✓
LAB 305. Defending Java Applications Against Weak Password Reset	✓	<b>√</b>			✓
LAB 306. Defending Python Applications Against Weak Password Reset	✓	<b>√</b>			✓
LAB 307. Defending C# Applications Against Weak Password Reset	✓	✓			✓
LAB 308. Defending Node.js Applications Against Weak Password Reset	✓	✓			✓
LAB 309. Defending TypeScript Applications Against Unrestricted Upload of File with Dangerous Type	✓	✓			✓
LAB 314. Defending TypeScript Applications Against SSRF	✓	✓			✓
LAB 316. Defending TypeScript Applications Against Hard-coded Credentials	✓	✓			✓
LAB 320. Defending TypeScript Applications Against Code Injection	✓	✓			✓
LAB 325. Defending TypeScript Applications Against CSRF	✓	✓			✓
LAB 326. Defending TypeScript Applications Against Path Traversal	✓	✓			✓

SKILL LABS (Continued)						
LAB 327. Defending C Applications Against Path Traversal	✓	<b>√</b>				✓
LAB 328. Defending C++ Applications Against Path Traversal	✓	<b>√</b>				✓
LAB 329. Defending Go Applications Against SSRF	✓	<b>√</b>	<b>√</b>			
LAB 333. Defending Go Applications Against Hard-coded credentials	✓	<b>√</b>	✓			
LAB 338. Defending Go Applications Against CSRF	✓	<b>√</b>	✓			
LAB 339. Defending Go Applications Against Path Traversal	✓	<b>√</b>	✓			
LAB 340. Defending C Applications Against Use After Free	✓	<b>√</b>	✓			
LAB 341. Defending C ++ Applications Against Use After Free	✓	<b>√</b>	<b>√</b>			
LAB 342. Defending TypeScript Applications Against Command Injection	✓	<b>√</b>	<b>√</b>			
LAB 343. Defending GO Applications Against Command Injection	✓	<b>√</b>	<b>√</b>			
LAB 344. Defending TypeScript Applications Against Incorrect Authorization.	✓	<b>√</b>	<b>√</b>			
LAB 345. Defending GO Applications Against Incorrect Authorization.	✓	<b>√</b>	✓			
LAB 346. Defending TypeScript Applications Against Deserialization of Untrusted Data.	✓	<b>√</b>	<b>√</b>			
LAB 347. Defending C Applications Against Null Pointer Dereference.	✓	<b>√</b>	<b>√</b>			
LAB 348. Defending C++ Applications Against Null Pointer Dereference	✓	<b>√</b>				✓
LAB 349. Defending TypeScript Applications Against SQL Injection	✓	<b>√</b>				✓
LAB 350. Defending Go Applications Against SQL Injection	✓	<b>√</b>				✓
LAB 351. Defending TypeScript Applications Against Cross-Site Scripting	✓	<b>√</b>				✓
LAB 352. Defending Go Applications Against Cross-Site Scripting	✓	<b>√</b>				✓
LAB 353. Defending TypeScript Applications Against Improper Authentication	✓	<b>√</b>				✓
LAB 354. Defending Go Applications Against Improper Authentication	✓	<b>√</b>				✓
LAB 355. Defending C Applications Against Stack-based Buffer Overflow	✓					✓
LAB 356. Defending Python APIs from Broken Object Level Authorization		<b>√</b>				
LAB 357. Defending Python APIs from Broken Authentication		<b>√</b>				
LAB 358. Defending Python APIs from Broken Object Property Level Authorization		<b>√</b>				
LAB 359. Defending Python APIs from Unrestricted Resource Consumption		<b>√</b>				
LAB 360. Defending Python APIs from Broken Function Level Authorization		<b>√</b>				
LAB 361. Defending Python APIs from Unrestricted Access to Sensitive Business Flows		<b>√</b>				
LAB 362. Defending Python APIs from Server Side Request Forgery		✓				
LAB 363. Defending Python APIs from Security Misconfiguration		<b>√</b>				
LAB 36 Defending Python APIs from Improper Inventory Management		<b>√</b>				
LAB 365. Defending Python APIs from Unsafe Consumption of APIs		✓				

SKILL LABS (Continued)					
LAB 366. Defending Python AI Applications from Prompt Injection		✓			
LAB 367. Defending Python AI Applications from Sensitive Information Disclosure		<b>√</b>			
LAB 368. Defending Python AI Applications from Supply Chain Compromise		<b>√</b>			
LAB 369. Defending Python AI Applications from Data and Model Poisoning		✓			
LAB 370. Defending Python AI Applications from Improper Output Handling		✓			
LAB 371. Defending Python AI Applications from Excessive Agency		✓			
LAB 372. Defending Python AI Applications from System Prompt Leakage		<b>√</b>			
LAB 373. Defending Python AI Applications from Vector and Embedding Weaknesses		✓			
LAB 374. Defending Python AI Applications from Misinformation		✓			
LAB 375. Defending Python AI Applications from Unbounded Consumption		✓			
LAB 610. ATT&CK: File and Directory Permissions Modification	✓	✓	✓		✓
LAB 611. ATT&CK: File and Directory Discovery	✓	✓	✓		✓
LAB 612. ATT&CK: Testing for Network Services Identification			✓		✓
LAB 613. ATT&CK: Testing for Vulnerability Identification Using Vulnerability Databases			✓		✓
LAB 615. ATT&CK: Updating Vulnerable Java Web Application Server Software	✓	✓	✓		✓
LAB 616. ATT&CK: Host Vulnerability Scanning			✓		✓
LAB 617. ATT&CK: Testing for Plaintext Secrets in Files			✓		✓
LAB 618. ATT&CK: Log Analysis			✓		✓
LAB 619. ATT&CK: Exfiltration Over C2 Channel			✓		✓
LAB 620. ATT&CK: Exploitation of Remote Services (Advanced)			✓		✓
LAB 621. ATT&CK: Password Cracking	✓	✓			✓
LAB 622. ATT&CK: Exploiting Windows File Sharing Server with External Remote Services		<b>√</b>			✓
LAB 623. ATT&CK: Exploiting Vulnerable Java Web Application Server Software	✓	✓	✓		✓
LAB 625. ATT&CK: Exploit Public-Facing Application (Advanced)			✓		✓
LAB 624. ATT&CK: Exploiting Java Web Application Server Misconfiguration	<b>√</b>	<b>√</b>	✓		✓
LAB 626. Using an Exploit Framework for SQL Injection	<b>√</b>	<b>√</b>	✓		✓
LAB 627. Using an Exploit Framework for Port Scanning.			<b>√</b>		✓
LAB 628. Using an Exploit Framework for SMB Version Scanning.			<b>√</b>		✓
LAB 629. Using an Exploit Framework for SNMP Scanning.			<b>√</b>		✓
LAB 630. ATT&CK: Exploiting Java SQL Injection to Extract Password Hashes	<b>√</b>	<b>√</b>			✓
LAB 631. ATT&CK: Network Service Discovery	<b>√</b>	<b>√</b>			✓

SKILL LABS (Continued)					
LAB 632. ATT&CK: Network Share Discovery	✓	✓			✓
LAB 633. Using an Exploit Framework for Web Application Scanning			✓		✓
LAB 634. ATT&CK: Create Account	✓	✓			✓
LAB 635. ATT&CK: Unsecured Credentials	✓	✓			✓
LAB 636. ATT&CK: Data from Local System					✓
LAB 637. ATT&CK: Valid Accounts					✓
LAB 638. Using Mimikatz			✓		✓
LAB 639. Using an Exploit Framework via Command Line Interface			<b>√</b>		✓
LAB 640. ATT&CK: Search Victim-Owned Websites					✓
LAB 641. ATT&CK: Password Policy Discovery					<b>√</b>
LAB 642. ATT&CK: Permission Groups Discovery					✓
LAB 643. Response: Detecting a Malicious Windows Service					✓
LAB 644. Response: Detecting Malware in the Windows Startup Folder					✓
LAB 645. Response: Detecting Malware in the Registry Run Keys					✓

<sup>\*</sup>Our NIST courses that map to 800-53 and 800-171 publications. To understand how courses map to specific requirements, please contact us.

## ABOUT CMD+CTRL SECURITY

CMD+CTRL Security is a pioneer in software security training. For over two decades, organizations of all sizes, from mid-sized to Global 100 companies, have relied on our training solutions to transform their software security. Our role-based modules, skill labs, and hands-on cyber ranges are designed to build skills that stick. Visit cmdnctrlsecurity.com to learn how we can help you launch a best-in-class training program.







