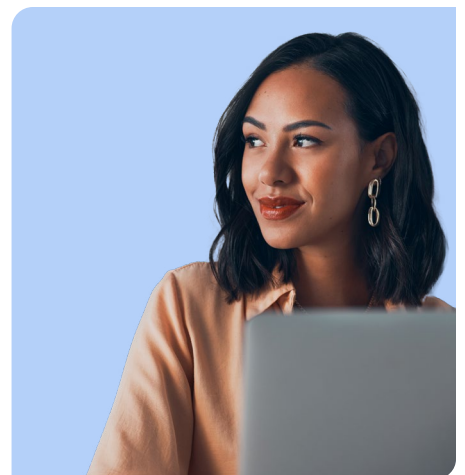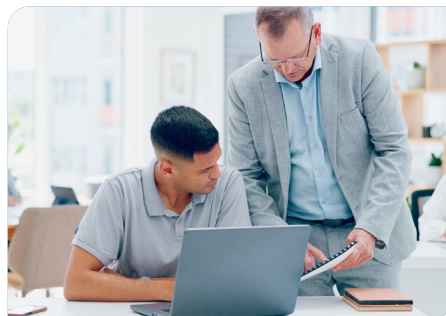# ThriveDX

Cyber Infrastructure & Penetration Testing Course

TDXCS-18

ThriveDX Cyber Infrastructure & Penetration Testing Course

Time Commitment	Skill Level	Format:	Course Category
50 hours total (6 days)	Basic Level: Cybersecurity Essentials	Live Online, Instructor Led	Penetration Testing

This dynamic 11-module course is designed to equip professionals with a strong understanding of cybersecurity infrastructure and penetration testing techniques. Each module is tailored to nurture practical skills across various aspects of cybersecurity.

Who Should Attend:

- IT professionals looking to specialize in cybersecurity.

- Network and system administrators looking to strengthen their security skills.

- Aspiring cybersecurity experts and modern SOC Operators.

- Security analysts and consultants seeking advanced knowledge and skills.

- Security Integrators

- Security Architects and CISOs

## Relevant for the Following Work Roles:

- Penetration & Vulnerability Tester.

Prerequisites:

- A basic understanding of computer networks and systems.

- Familiarity with Windows and Linux operating systems.

Upon Completion, Participants will Emerge with:

- Mastery of advanced cybersecurity tools and techniques.

- Practical knowledge in identifying and mitigating a wide range of cyber threats.

- Enhanced skills in securing networks, systems, and cloud environments.

- Understanding of legal and ethical considerations in cybersecurity.
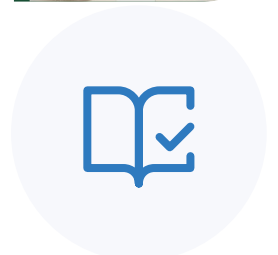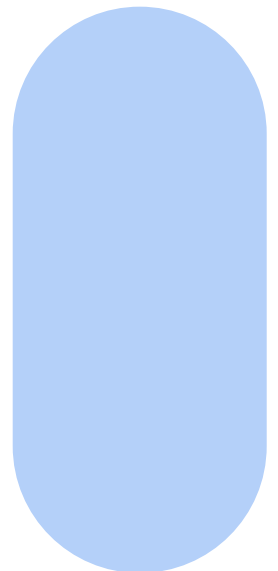
Program Structure

Module 1

Introduction to Penetration Testing

- ✅ Penetration Testing Terminology
- ✅ Assessment Types
- ✅ Cyber Attack Cycle & Attack Surfaces
- ✅ Industry Standards and Methodologies

Module 2

Advanced Footprinting and Reconnaissance

- ✅ Legal and Ethical Considerations
- ✅ Search Engines and Google Hacking DB
- ✅ Advanced Information Gathering Techniques
- ✅ Utilizing AI Powered Reconnaissance Tools
- ✅ Website and Network Footprinting

Module 3

Web Penetration Testing

- ✅ Cloud Basics
- ✅ OWASP Top 10 for Web
- ✅ Cross-Site Scripting - XSS
- ✅ SQL Injection

Module 4

Network Scanning and Evasion Techniques

- ✅ Comprehensive Network Scanning
- ✅ Domain enumeration techniques
- ✅ Vulnerability Scanning and Analysis
- ✅ TCP/UDP Handshakes and Advanced Scanning Techniques
- ✅ Firewall and IDS Evasion
- ✅ Automation in Scanning

Module 5

Password Security and Cracking Techniques

- ✅ Secure Password Policies and Best Practices
- ✅ Brute Forcing and Password Spraying
- ✅ Password Cracking
- ✅ Known Wordlists, Rainbow Tables, and Third Party Services

Module 6

Domain Escalation and Kerberos Attacks

- ✅ Windows Privilege Escalation Techniques
- ✅ On Prem and Hybrid Active Directory Enumeration
- ✅ Kerberos Attack Techniques
- ✅ Persisting Administrative Access in Active Directory

Module 7

Exploitation Frameworks and Scripting

- ✅ Utilizing Metasploit Framework
- ✅ Automation in Penetration Testing
- ✅ Creating Malicious Files
- ✅ Fundamental Concepts of Exploitation
- ✅ Data Exfiltration from Compromised Hosts

Program Structure ➡

Module 8

PowerShell Skills

- ✅ PowerShell Fundamentals
- ✅ PowerShell ISE
- ✅ PowerShell Modules
- ✅ Attack with PowerShell
- ✅ PowerShell to EXE

Module 9

Anonymity, Privacy, and Secure Communication

- ✅ Proxy Servers, VPNs, and TOR Usage
- ✅ Implementing Proxy Chains
- ✅ Secure Communication Best Practices

Module 10

Wireless Network Security and Attacks

- ✅ Wi-Fi Encryption and Security
- ✅ EAPOL Protocol and Attack Frameworks
- ✅ Rogue Access Points

Module 11

Penetration Testing Documentation & Reporting

- ✅ Documentation Tips
- ✅ Report Structure
- ✅ Findings Classification & Risk Analysis
- ✅ ndustry Backed Remediation Recommendations

Certification Readiness

All participants completing the course will receive a **ThriveDX Course Completion Certification.** Participating completing the final accreditation exam will also receive a **ThriveDx Penetration Tester Certification.** This course also provides practical knowledge for completing the GIAC GPEN certification and CEH Certification.

Note: The certification subjects may change based on the certification provider.
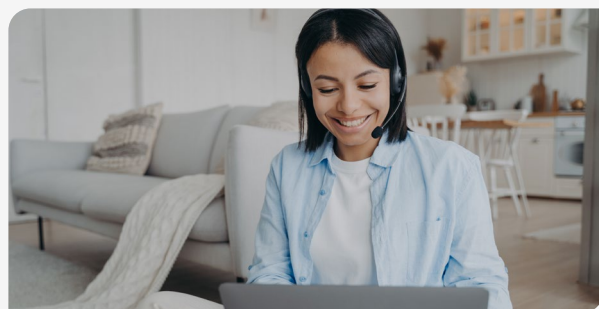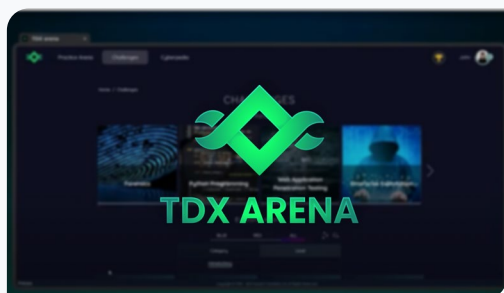
Embedded Labs and Challenges

The course includes our state of the art proprietary cloud-based digital education platform, **Arena**, in which real-life scenarios and advanced tech teaching meet in a gamified environment.