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Cybersecurity Essentials Course





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The cybersecurity landscape is constantly evolving, with new threats emerging at an ever-accelerating pace. The Cybersecurity Essentials course offers a deep dive into the core areas of cybersecurity across ten meticulously structured modules. Starting with foundational concepts and defense strategies, the program progresses through network and operating systems security, cloud computing, endpoint protection, applied cryptography, and incident response before exploring advanced topics such as vulnerability and penetration testing, security frameworks and standards, and web and wireless network security. This course is tailored for those looking to fortify their cybersecurity knowledge and skills, providing them with the tools and insights needed to protect modern digital infrastructures effectively.

Who Should Attend:

- IT professionals
- Network and system administrators
- Security practitioners
- Aspiring cybersecurity professionals

Prerequisites:

- Basic understanding of computer networks and systems
- Knowledge of operating systems, especially Linux and Windows
- Experience in network administration, system administration, or IT support roles is beneficial.

Relevant for the Following Work Paths:

- Cybersecurity Analysts
- Incident Responders and Handlers
- IT Security Administrators
- Network Security Engineers
- Security Operations Center (SOC) Personnel
- Information Security Officers
- Compliance and Risk Management Officers



Upon Completion, Participants Will Emerge With:



Enhanced Cybersecurity Skills:

Participants will gain hands-on skills in key areas of cybersecurity, improving their ability to defend against threats.



Talent Development: Investing in this training supports professional growth and skill development, aiding talent retention.



Operational Improvement: Practical knowledge from the course can be directly applied to improve the security posture of organizations.



Competitive Advantage: Organizations with well-trained cybersecurity personnel are better equipped to handle emerging threats and challenges.



Compliance and Risk Management:

Understanding of various security frameworks and compliance standards.



Proactive Security Posture: Participants will learn to adopt a proactive approach to cybersecurity, anticipating and mitigating potential threats.



Program Structure

Module 1

Core Cybersecurity Concepts

- Cybersecurity Fundamentals
- Defense Strategies
- Information Security Principles
- Utilizing AI in Cybersecurity

Module 2

Network Security

- Network Architecture and Secure Design
- Network Protocols
- Zero Trust Architecture
- Firewall and Intrusion Detection Systems

Module 3

Operating Systems Security

- Linux Security and Hardening
- Windows Security, Access Controls, and Group Policies
- System Monitoring and Vulnerabilty Management

Module 4

Cloud Computing and Virtualization

- Private vs. Hybrid Cloud
- Cloud Security Essentials
- IAM and Security Groups
- Monitoring and Securing Cloud Services

Module 5

Endpoint and Mobile Security

- Data Loss Prevention
- Mobile Device Security and Management
- Endpoint Protection Technologies

Module 6

Applied Cryptography

- Cryptographic Algorithms and Key Management
- Cryptography in Data Protection

Module 7

Threat Hunting & Incident Response

- Threat Hunting
- Incident Detection and Analysis
- Incident Response Planning
- Post-Incident Activities and Forensics
- SIEM & SOAR Tools

Module 8

Vulnerability and Penetration Testing

- Ethical Hacking Basics
- Vulnerability Scanning Techniques
- Penetration Testing Tools and Methodologies

Module 9

Security Frameworks and Standards

- CIS Critical Controls
- NIST Cybersecurity Framework
- MITRE ATT&CK Framework

Module 10

Web Application Security

- Web Application Security Principles
- OWASP Top 10
- Emerging Threats and Security Practices



Certification Readiness

All participants completing the course will receive a **ThriveDX Course Completion Certification**. Participants completing the final accreditation exam will also receive a **ThriveDX Practitioner Tester Certification**. This course also aligns with the requirements of the GSEC certification.

<u>Note</u>: The certification subjects may change based on the certification provider, and additional study and research may be necessary to meet certification requirements.





Embedded Labs and Challenges

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







