Metailearn

ADCS
Advanced Diploma
In cyber Security

ADVANCED DIPLOMA IN CYBER SECURITY

The Advanced Diploma in Cyber Security is an intensive and comprehensive program designed to equip participants with the knowledge, skills, and practical experience required to defend against and mitigate cyber threats in today's complex digital landscape.

Approved by American Board of Education

Overview of

ADVANCED DIPLOMA IN CYBER SECURITY

The Advanced Diploma in Cyber Security is an intensive and comprehensive program designed to equip participants with the knowledge, skills, and practical experience required to defend against and mitigate cyber threats in today's complex digital landscape. This diploma program offers a deep dive into the field of cybersecurity, focusing on advanced techniques, emerging technologies, and real-world applications.

Throughout the course, participants will gain a thorough understanding of cyber threats, vulnerabilities, and risks, as well as the methodologies and strategies employed to protect critical assets and information. The program emphasizes a hands-on approach, combining theoretical knowledge with practical lab exercises, case studies, and industry-relevant projects.

Course Duration : 1 Year + Internship

Course Objectives:

1. Develop an in-depth understanding of the fundamental concepts, principles, and best practices in cybersecurity.
2. Gain practical knowledge of various cyber attack techniques, tools, and countermeasures.
3. Learn advanced techniques for network security, secure systems, and application security.
4. Develop skills in incident response, digital forensics, and threat intelligence.
5. Explore cloud security considerations, risk management, and compliance f rameworks.
6. Acquire knowledge and expertise in ethical hacking and penetration testing methodologies.

7. Understand the importance of security governance, policies, and standards in organizational cybersecurity.
8. Develop the ability to assess risks, develop security strategies, and implement effective security measures.
9. Gain hands-on experience through lab exercises, simulations, and real-world projects.
10. Enhance critical thinking, problem-solving, and decision-making skills in the context of cybersecurity.

The course modules are designed to provide comprehensive coverage of essential cybersecurity topics, allowing participants to gain specialized knowledge in different areas while building a holistic understanding of cyber security strategies.

Upon successful completion of the Advanced Diploma in Cyber Security, participants will possess the necessary skills and knowledge to secure networks, protect systems and data, respond to security incidents, and effectively mitigate cyber threats. Graduates will be well-equipped to pursue careers as cybersecurity professionals, security analysts, incident responders, penetration testers, and security consultants, among other roles in the rapidly growing field of cybersecurity.

Course Outline

MODULE 1

CYBER SECURITY BUILDING BLOCK

- Introduction to Cyber Security
- Introduction to Cyber Security Roles and Responsibilities.
- Careers in Cybersecurity
- Basic terminologies
- Elements of Information Security(CIA-Triad), Non-repudiation,
- Authenticity Motives, Goals, and objectives of Information Security Attacks
- Types of Hackers
- Information Security Threat Categories.
- Cyber Kill Chain

LABS

- Social
- Engineering
- Phishing

Zphisher

MODULE 2

INFRASTRUCTURE AND NETWORKING

SECTION A

- Fundamentals of
- Networking Network
- Network devices
- Internet Protocol
- NAT and PAT
- Understanding the OSI layer
- Overview of TCP/IP Model

- TCP and UDP
- Protocols and Ports
- Packet Tracer
- Wireshark
- Virtualization and cloud-computing

LABS

- Router Configuration
- OSPF and EIGRP
- Switch Configuration
- Vlan and VTP
- Access Control List configuration
- Switch configuration
- VLAN configuration
- VLAN Trunking Protocol

MODULE 3

LINUX ESSENTIALS

- Kali-Installation-Configuration (Manual Partition
-) Introduction to Linux
- Linux fundamentals
- Basic Commands
- User Management -Permission-Process

LABS

- Basic Commands
- Installing Software
- Pipes and Filters

MODULE 4

OFFENSIVE SECURITY

- Scanning
- Attacks on Cyber Security
- Hacking Phases
- OSINT tools
- VPN & TOR
- Cryptography
- Information Gathering Techniques Scanning -Tools - Nmap
- Metasploit Framework
- Brute Force Attacks
- Enumeration Exploitation Privilege Escalation-Boot to Root

LABS

- Scanning with NMAP
- OSINT Tools
- Shodan
- Nessus
- Boot to Root machine

MODULE 5

WEB APPLICATION SECURITY

- Web Application Security
- HTTP Request and Response
- BurpSuite
- Owasp Top 10 Vulnerabilities

LABS

- BurpSuite
- Owasp Top 10 vulnerabilities (2017 & 2021)

MODULE 6

NETWORK SECURITY

- Introduction to Network Security
- The Confidentiality, Integrity and Availability
- (CIA) IDS and IPS
- Firewall and Types
- Honeypot
- Identity and Privilege Access Management

LABS

- Firewall
- configuration IPS and
- IDS
- Wireshark

Snort

MODULE 7

SECURITY MANAGEMENT AND OPERATION

- SOC and Needs of SOC
- SOC Workflow and Components
- SOC models and Generations
- SOC implementation
- Best practice for running SOC
- SOC vs NOC
- Incident, Event and Log

MODULE 8

SECURITY INFORMATION & EVENT MANAGEMENT

- Introduction to SIEM
- How do SIEM tools work?
- Need of SIEM
- Functions of SIEM
- Architecture and
- Components SIEM Architecture

MODULE 9

SPLUNK

- Introduction to splunk
- Working and Architecture of Splunk
- Splunk Enterprise Installation
- Indexing Data into Splunk
- Splunk Forwarder Installation

LABS

- Splunk Enterprise
- Splunk Universal Forwarder

MODULE 10

ANDROID PENETRATION TESTING

- Introduction of Course
- Introduction of Android
- Environment Setup
- Useful Tools and
- Configuration Static Analysis
- OWASP TOP-10

Candidates having achieved ADVANCED DIPLOMA IN CYBER SECURITY from Metailearn can acquire eminent security roles as:

- **Cybersecurity Analyst**
- **Penetration Tester**
- **Security Engineer**
- **Cybersecurity Specialist**
- **Security Consultant**

About
Metailearn

At Metailearn Kochi, we are passionate about revolutionizing education. Our journey began with a vision to bridge the gap between traditional learning and the demands of the modern world.

Our Mission
We are on a mission to empower learners of all ages with the skills and knowledge they need to thrive in the digital era. Through innovative teaching methods and cutting-edge technology, we are redefining education to make it more accessible, engaging, and effective.

Our Approach
Metailearn Kochi stands at the intersection of technology and education. Our team of dedicated educators and technologists work collaboratively to create immersive learning experiences that cater to diverse learning styles. We believe that every learner is unique, and our programs are designed to nurture individual talents and passions.

AMERICAN BOARD OF EDUCATION

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