



# Cyber Security Professional

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The 21st century brings to us a plethora of new technologies and an unending stream of new challenges. And as these challenges evolve every day, so does the need for cybersecurity. This program is the starting step for you to explore, discover, and grab the foundational skills & knowledge you need in the growing field of cybersecurity. Build the essential knowledge on the origins of Cyberspace, the whats and hows of dangerous cyber threats, and improve your cyber safety as a responsible cyber citizen. Build the practitioner-level understanding of the hacker mindset and the essential techniques, tools, and procedures of the offensive approach to hacking. Leverage this knowledge to build your roadmap towards a Professional Cybersecurity Career, earn the badges and show them to the world!

# Evolution of Cyberspace

Learn the origins and evolution of Cyberspace, the Internet, and the widely used terminology. Gain an understanding of the current state of the Internet, where we are in the current world, and the fundamental principles of Cybersecurity.



## Origins of Cyberspace

- What is Cyberspace?
- The Internet & Its Backbone
- The Rise of World Wide Web
- Cyber Geography
- Information Flow in the Cyberspace

## Extended Frontiers of Cyberspace

- IoT: Wearables to Autonomous Systems
- The World of Drones
- Blockchain
- The Space Sector

## State of the Cyberspace Today

- Cyberspace in our Daily Life
- Real vs Virtual Lives
- Data: The New Oil
- The Shocking Scale of Internet Attacks
- Cyber Security

## Cyber Security Principles

- Confidentiality
- Integrity
- Availability
- Accountability
- Authentication
- Authorization



### Course Badge

Cyber Explorer Level 1

Compete with your peers and solve a series of challenges by leveraging your familiarity with the security principles and the workings of cyberspace to build your score and to earn the Cyber Explorer Level 1 Badge.

# Diving into Cyber Threats

Build the essential knowledge of different types of attack vectors, threat actors, and motives along with the emerging Tactics, Techniques, and Procedures used by attackers to perform cyber attacks against organizations and individuals in cyberspace.



## Essentials

- What is a Cyber Attack?
- Cyber Threats
- Risk
- Vulnerabilities
- Exploits
- STRIDE

## Threat Landscape

- The Greatest Hacks of All Time
- Impacts of Cyber Threats
- Threat Actors & Motives
- Attack Vectors

## Malware

- Malware Evolution
- Behavior & Propagation
- The Malware Family Tree
- Malware as a Weapon
- Signs that your Device is Infected

## Social Engineering

- What is Social Engineering?
- Social Engineering as a Primary Attack Vector
- The Social Engineering Kill Chain
- Tactics & Techniques
- Identifying and dealing with a Phishing Attack

## Emerging Cyber Threats

- Ransomware & Cryptojacking
- Advanced Persistent Threats
- Attacks on the Cloud & IoT
- Cyber Threats in the Space Sector
- Misinformation & Disinformation in the COVID Age



### Course Badge

Cyber Explorer Level 2

Cyber attacks are inevitable. Demonstrate your knowledge of the emerging cyber threats, attacker tactics, and techniques and earn the Cyber Explorer Level 2 Digital Badge.

# Cyber Safety

Improve your Cyber Safety by acquiring the skills required to protect yourself against the threats in cyberspace. Experiment with the ways to secure your digital footprint, devices, passwords, emails, etc. and gain an understanding of netiquette, your digital rights and the qualities of being a responsible Cyber Citizen.



## Online Identity & PII

- Your Online Identity
- Understanding PII & PHI
- Digital Footprint & Online Reputation
- User Tracking
- What is Privacy?

## Privacy

- Privacy Fundamentals
- Privacy vs Security vs Secrecy
- Privacy Principles and Policies
- Privacy on the Web
- Privacy Impacts of Emerging Technologies

## Netiquette & Digital Citizenship

- The Core Rules of Netiquette
- The 9 Ps of Digital Citizenship
- Digital Health & Wellness
- Finding a Balance in the Digital World
- Chatting & Red Flags
- Cyberbullying & Cyberstalking
- Reporting Illegal & Harmful Content

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## Passwords & Passphrases

- Why Passwords?
- The Most Common Passwords
- Strong & Weak Passwords
- Power up your Password
- Password Managers
- A Future Beyond Passwords

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## Personal Devices Security

- Mobile Devices
- Laptops & Computers
- Removable Media
- Backing up your Data
- Installing & Using Trusted Software
- Protecting yourself from Malware
- Tools of the Trade

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## Secure Connectivity

- Connectivity in the Current World
- Wireless Devices & Hotspots
- Dangers of Unknown Networks
- The Do's & Don'ts of Using Public WiFi
- VPNs, Firewalls, and Padlocks

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## Email Security

- Why Secure your Email?
- Dealing with Phishing & Spam Emails
- Recent Activity
- Account Permissions & Recovery
- Passwords & MFA
- Leveraging Disposable Emails

## Social Media Security

- A Quick History of Social Media
- Social Media Risks
  - Oversharing & Geotagging
  - Stranger Danger
  - Identity Theft
  - Social Media Scams
- Why Target Social Media?
- Safely Navigating the Social Media

## Safe Web Browsing

- What is 'Safe' Web Browsing?
- Safe Web Browsing Mythbusters
- The No-Go Zones: Dark Web & Deepweb
- Safe Web Browsing Tips & Techniques

## Securing Online Transactions

- The Rise of the Online Marketplace
- Online Shopping Trends & Threats
- What (Sensitive) Information is at stake?
- Online Transaction Do's & Don'ts

## Cyber Literacy

- Misinformation
- Disinformation
- Hoaxes & Fakes
- Inappropriate Content
- Copyright, Fair Use & Intellectual Property
- Tools & Techniques

## Knowing Your Digital Rights

- Right to Freedom
- Right to Protection
- Right to Information
- Right to Privacy
- Right to be Forgotten

## Cyber Laws & Standards

- Cyber Crimes
- Legal Penalties
- Cyber Laws & Standards
- Dealing with Cyber Crimes

### **Course Badge** Responsible Cyber Citizen

Deep dive into a series of real-world scenarios and navigate them by demonstrating your knowledge of safe and responsible use of technology. Make responsible decisions in each of the scenarios, build up points, earn the Responsible Cyber Citizen Badge, and prove to the world that you're a responsible Cyber Citizen

# Hacker Essentials

Learn about the hacker mindset, the techniques & approaches they use; and the necessary foundational knowledge required to enter into the world of ethical hacking.



## The Hacker Mindset

- Is Hacking Good or Bad?
- Adversarial Thinking
- Hacker Manifesto 4.0
- Penetration Testing
- Red, Blue & Purple Teaming

## Threat Modeling

- Why Threat Modeling
- What, When and How?
- The Four Question Framework
- STRIDE in Depth
- Threat Modeling in Action
  - Drawing Data Flow Diagrams
  - Identifying Threats
  - Rating the Threats

## Hacking Foundations

- Your Hacking Arsenal
- Working with Commandline
- Operating Systems Fundamentals
- Networking Fundamentals
- Web Application Fundamentals
- The ABCs of Cryptography



## Course Badge

### Cyber Ranger

You've seen the attacker techniques, heard all the war stories, it's time to implement them. But before entering into the world of ethical hacking, you need to prove to the world that you have the appetite to hack by earning the Cyber Ranger Digital Badge.

# The Offensive Approach

Let's enter the world of ethical hacking. Learn the step by step process i.e, the offensive approach a hacker follows in the real world to gather information, discover and exploit weaknesses to get initial access, eventually compromising the target without revealing your true identity.



## Offensive Security Methodologies

- Deep Dive into Penetration Testing Methodology
- A Glimpse of Other Methodologies
  - The Lockheed Martin Cyber Attack Kill Chain
  - Offensive TTPs – MITRE ATT&CK
  - The Pentest Execution Standard

## OSINT & Active Recon

- Data, Information & Intelligence
- OSINT as a Mindset
- Goals of OSINT Collection
- The Intelligence Cycle
- The Tools of the Trade
- Information Gathering & Analysis

## Vulnerability Assessment

- What is 'Vulnerability?'
- Risk vs Threat vs Vulnerability
- Vulnerability Assessment Process
- The Tools of the Trade
- Assessing a Target's Vulnerabilities

## Attacks & Exploitation

- What is Exploitation?
- Exploitation Goals
- The Vulnerability – Exploit Relationship
- Types of Attacks
  - Password Attacks
  - Web Attacks
  - OS & Network Attacks
  - Human-Centric Attacks
- The Tools of the Trade
- Exploit Generation and Gaining Initial Access

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## Post Exploitation

- Why Post Exploitation?
- The Tools of the Trade
- Common Techniques in Post Exploitation
  - Maintaining Access
  - Pivoting
  - Privilege Escalation
  - Password Cracking
  - Data Exfiltration

## Anonymity

- What is Anonymity?
- Anonymity in the Cyberspace
- Anonymity vs Privacy
- The Tools of the Trade
- Clearing Tracks and Staying Undetected



**Course Badge**  
Cyber Warrior Level 1

Band up with 5 peers to attack and compromise targets of different difficulty levels and ultimately earn the Cyber Warrior Level 1 Badge.

# The Road Ahead

Gain an introductory overview of the popular cybersecurity domains, well-defined career maps, and plan a roadmap for yourself to become a successful cybersecurity professional.



## Opportunities in the Cybersecurity Ecosystem

- Future of Cybersecurity Industry
- Exploring the Cybersecurity Domains
- Cybersecurity Career Roadmaps
- Find Your Right Fit in Cybersecurity

 Call to Action

Leverage our custom Cybersecurity Roadmap Tool to build yourself a Cybersecurity Career Path and dive into it. Start your Sprint. All the Best!

# Contact us

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