



REGENT EDUCATION & RESEARCH FOUNDATION

Group of Institutions

Name of Course: 1 Week Cyber Security Training
Academic Year: 2023 - 2024

PROVISIONAL COURSE MODULE

Class-1.1. Cybersecurity Fundamentals (Duration- 2hrs)

1. Definition and importance of cybersecurity
2. Cyber threat landscape
3. Types of cyberattacks and attackers
4. Key cybersecurity concepts

Class-1.2. Security Principles (Duration- 1hrs)

1. Confidentiality, Integrity, and Availability (CIA) triad
2. Least privilege principle
3. Security policies and procedures

Class-2.1. Cryptography (Duration – 2 hrs)

1. Encryption and decryption
2. Public key infrastructure (PKI)
3. Cryptographic algorithms and protocols
4. Digital signatures and certificates

Class-2.2. Network Security (Duration – 1 hrs)

1. Network topologies and protocols
2. Firewalls and intrusion detection systems
3. Secure communication protocols (e.g., SSL/TLS)
4. Virtual Private Networks (VPNs)

Class-3.1. Intermediate Cybersecurity (Duration – 2 hrs)

1. Operating System Security
2. Hardening operating systems
3. User authentication and access control
4. Patch management and updates
5. Host-based security solutions
- 6.

Class-3.2. Security for Web Applications (Duration – 1 hrs)

1. Common web vulnerabilities (e.g., XSS, SQL injection)
2. Secure coding practices
3. Web application firewalls (WAFs)

Campus : Regent Education & Research Foundation Group of Institutions

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Class-4.1. Security Testing and Vulnerability Assessment (Duration: 2 hrs)

1. Vulnerability scanning and assessment
2. Penetration testing methodologies
3. Exploitation techniques
4. Reporting and remediation

Class-4.2. Cloud Security (Duration: 1 hrs)

1. Cloud computing models (IaaS, PaaS, SaaS)
2. Cloud security challenges and solutions
3. Identity and access management in the cloud
4. Cloud compliance and audit

Class-5.1. Web Security (Duration: 2 hrs)

1. Common Web Vulnerabilities (SQL Injection, XSS, CSRF)
2. Web Application Firewalls
3. Secure Coding Practices

Class-5.2. Endpoint Security (Duration: 1 hrs)

1. Antivirus and Anti-malware
2. Host-based Firewalls

Class-6.1. Ethical Hacking and Penetration Testing (Duration: 2 hrs)

1. Introduction to Ethical Hacking
2. Penetration Testing Methodologies
3. Tools and Techniques

Class-6.2. IoT (Internet of Things) Security (Duration: 1 hrs)

1. IoT Architecture and Challenges
2. Security Risks in IoT
3. Securing IoT Devices

Class-7. Hands-on Training and Practice (Duration: 3 hrs)

1. Importance of practical skills in developing and maintaining cyber security skills.
2. Coding Exercises and Internal assessment

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