CYBER SECURITY CURRICULUM AND PROFESSIONAL CERTIFICATION.

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<u>**Note:-**</u> Always give student task to do after each class, and always make the class practical.

1. Introduction to Cyber Security
    - Overview of Cyber Security
    - Importance of Cyber Security
    - Key Terminologies

2. Fundamentals of Networking
    - Basics of Networking
    - Network Protocols and Standards
    - Network Topologies and Architectures

3. Careers in Cyber Security
    - Introduction
    - Security Analyst
    - Security Engineer
    - Incident Responder
    - Penetration Tester
    - Red Teamer

4. Threats and Vulnerabilities
    - Types of Cyber Threats (Malware, Phishing, etc.)
    - Common Vulnerabilities
    - Case Studies of Major Cyber Attacks

5. Cyber Security Tools and Techniques
    - Introduction to Security Tools (Nmap, Wireshark, etc.)
    - Penetration Testing
    - Vulnerability Scanning
    - Firewalls and Intrusion Detection Systems

6. Cryptography
    - Basics of Cryptography
    - Symmetric and Asymmetric Encryption
    - Hashing and Digital Signatures
    - Public Key Infrastructure (PKI)

7. Security Policies and Procedures
    - Security Policy Development
    - Incident Response Planning
    - Business Continuity and Disaster Recovery
    - Risk Management and Assessment

8. Legal and Ethical Issues in Cyber Security
    - Ethical Hacking
    - Data Privacy and Protection

9. Practical Labs and Projects
   - Hands-on Labs with Security Tools
   - Real-world Case Studies
   - Group Projects and Presentations

10. Certification Preparation
    - CompTIA Security+
    - Certified Ethical Hacker (CEH)
    - Certified Information Systems Security Professional (CISSP)
    - Certified Information Security Manager (CISM)
    - ISC^2 Certification

11. Final Assessment and Review
    - Comprehensive Exam
    - Practical Skills Assessment
    - Course Review and Feedback

This curriculum provides a comprehensive overview of Cyber Security principles, tools, and practices, preparing students for both professional certifications and real-world security challenges. And also the curriculum can be change at anytime due to the development in Cyber Security Nesh.