**CYBER SECURITY CURRICULUM AND PROFESSIONAL CERTIFICATION.**

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**Note:-**  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

1. Fundamentals of Networking

- Basics of Networking

- Network Protocols and Standards

- Network Topologies and Architectures

1. Careers in Cyber Security

- Introduction

- Security Analyst

- Security Engineer

- Incident Responder

- Penetration Tester

- Red Teamer

1. Threats and Vulnerabilities

- Types of Cyber Threats (Malware, Phishing, etc.)

- Common Vulnerabilities

- Case Studies of Major Cyber Attacks

1. Cyber Security Tools and Techniques

- Introduction to Security Tools (Nmap, Wireshark, etc.)

- Penetration Testing

- Vulnerability Scanning

- Firewalls and Intrusion Detection Systems

1. Cryptography

- Basics of Cryptography

- Symmetric and Asymmetric Encryption

- Hashing and Digital Signatures

- Public Key Infrastructure (PKI)

1. Security Policies and Procedures

- Security Policy Development

- Incident Response Planning

- Business Continuity and Disaster Recovery

- Risk Management and Assessment

1. Legal and Ethical Issues in Cyber Security

- Ethical Hacking

- Data Privacy and Protection

1. Practical Labs and Projects

- Hands-on Labs with Security Tools

- Real-world Case Studies

- Group Projects and Presentations

1. Certification Preparation

- CompTIA Security+

- Certified Ethical Hacker (CEH)

- Certified Information Systems Security Professional (CISSP)

- Certified Information Security Manager (CISM)

- ISC2 Certification

1. 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.