Course Name: Advanced Cyber Security

Prerequisites:

- Laptop/PC
- Stable internet connection
- KENET Cybersecurity awareness course
- Medium to good knowledge of the UNIX/Linux command line environment
- Basic knowledge of TCP/IP networking
- MUST have taken the ISOC NetOps course in UNIX/Linux and DNS Fundamentals

Course Outline

- **Introduction**
  - ✓ Understand the objective and learning outcomes of the course
  - ✓ Outline the course modules

Course Modules:

1. **Course terminologies**
   - ✓ Outline and discuss some cyber security terms which you will encounter as you navigate the course
2. **Linux command line basic refresher**
   - ✓ Linux history
   - ✓ Linux commands
   - ✓ Linux text editors
   - ✓ TCP/IP network essentials
   - ✓ Linux file system
   - ✓ Linux scripting
   - ✓ Security
3. **Firewall and VPNs**
   - ✓ Definition of a firewall
   - ✓ Types of firewalls
   - ✓ Stateful and Stateless firewalls
   - ✓ Features of a firewall

- ✓ Types of open-source firewalls

4. **Web CMS and Server Hardening**
   - ✓ Introduction
   - ✓ Types of website attacks
   - ✓ Protecting your webserver
   - ✓ Web server hardening (Apache)
   - ✓ ModSecurity (ModSec)

5. **Passwords and Authentication Methods**
   - ✓ Introduction
   - ✓ Password management best practices
   - ✓ Authentication methods
   - ✓ Biometric
   - ✓ Electronic card access and tokens

6. **Email Server Basics and Hardening**
   - ✓ Mail server configuration
   - ✓ How email works
   - ✓ SMTP in brief
   - ✓ Email service components
   - ✓ Choosing an MTA
   - ✓ Secure mail server configuration
   - ✓ Mail delivery protocols
   - ✓ Common attacks/threats on email servers
   - ✓ Types of phishing attacks
   - ✓ Distributed Denial of Service Attacks (DDoS)

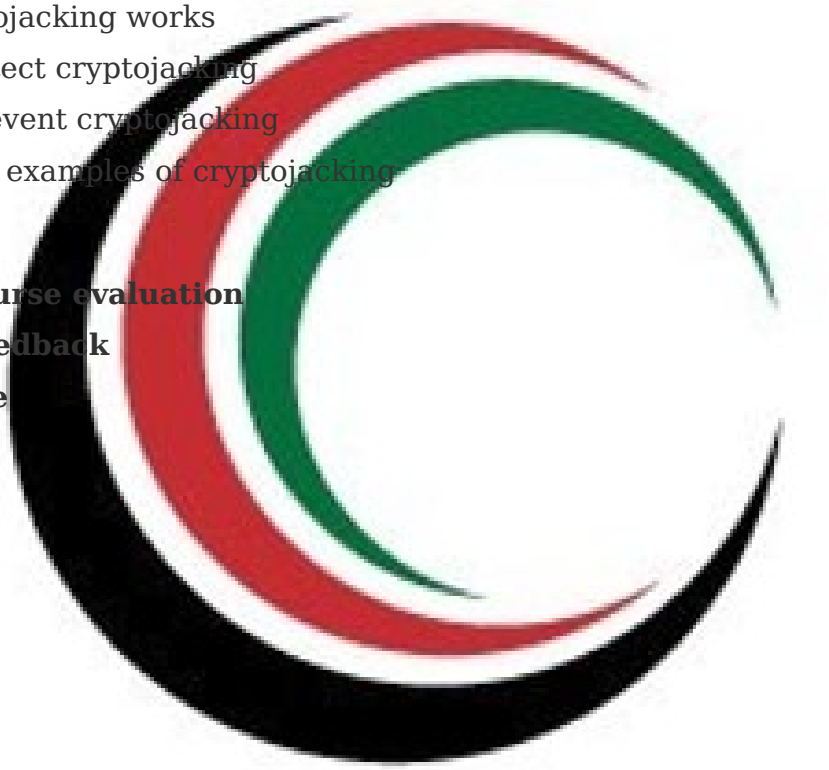
7. **Wireless and Wi-Fi Security**
   - ✓ Introduction to wireless security
   - ✓ Threats to wireless security
   - ✓ Securing wireless technology
   - ✓ Wired Equivalent Privacy (WEP)
   - ✓ Eduroam

8. Network Security Architecture and Isolation

- ✓ Introduction
- ✓ Network threats and attacks - common terms
- ✓ Network security threats classes and prevention
- ✓ Network attacks -types and mitigation

9. Cryptojacking

- ✓ Introduction and definitions
- ✓ How cryptojacking works
- ✓ How to detect cryptojacking
- ✓ How to prevent cryptojacking
- ✓ Real world examples of cryptojacking



- **End of course evaluation**
- **Course feedback**
- **Certificate**