CIRRICULUM FOR CYBERSECURITY

In this course learners will be taught ethical hacking from scratch . No prior knowledge is required to pursue the curriculum . At the end of the course learners would be able to identify flaws , break things down to build better solutions.

1. Introduction:

\* Course Overview

\* What , Why , when , where and hows of cybersecurity

1. Setting up a hacking lab:

\* Initial Prepration

\* Installing Kali , Tails and Ubuntu as VM on windows

1. Linux Basics:

\* Basic Overview

\* The Linux Filesystem

\*Understanding sudo and sudo su

\* The Terminal and linux commands

\*Finding Files in kali

\*Managing Kali Linux Services - SSH , HTTP , FTP

\* Installing and removing tools - apt , pip , apt-get , dpkg etc

1. Command Line Fun :

\*The bash Environment

\*Bash Scripting

\* Text Searching and Manipulation : grep , sed , cut , awk , nano , vi , comm , diff , vimdiff , etc

1. Network Hacking:

\*Introduction to penetration Testing

\*Networking Basics

\* Connecting a wireless adapter to kali

\* What is mac how to change it ?

\*Wireless Modes (Managed and Monitored)

\*Wireshark

\*tcpdump

1. Hardware for hacking:

\*Raspberry pi

\*Arduino

\*Rubber Ducky , Scripting

\* Wifi Pineapple

\*HackRF

\*OMG Cable

\*IOT for Hacking

1. Social Engineering :

\* hacking an Organisation

\* Tackticks For Hacking

\* Power of listenig

\* Demonstrations

1. Information Gathering :

\* Taking Notes

\* Website reach

\* Google hacking

\*Netcraft

\* Shodan

\*Pastebin

\*Email Harvesting

\*Password Dumping

\*OSINT Framework

\*Malteago

\*DNS Enumeration

\*Port Scanning

\*SMB Enumeration

\*SMTP Enumeration

1. Network Hacking :

\*Packet Sniffing Basics

\*Wifi Bands - 2.4Ghz and 5Ghz

\*Targetted Packet Sniffing

\*Deauthentication Attack (Disconnecting Any Device from the network)

1. Network Hacking :

\*Gaining Access introduction

\*Theory Behind Cracking WEP Encryption

\*WEP-Cracking Basics

\*Fake Authentication Attack

\*ARP Request Replay Attack

1. Network Hacking - Gaining Access - WPA/WPA2 Cracking :

\* Intro to WPA and WPA2 Cracking

\*Capturing the Handshake

\*Creating the wordlist

\*Cracking WPA and WPA2 Using a wordlist Attack

1. Network Hacking - Post Connection Attacks - Information Gathering :

\*Installing Windows as a VM

\*Discovering Devices Connected to the same network

\*Gathering sensitive info about connected devices

\*Gathering More Sensitive info

1. Network Hacking - Detection and security :

\*Detecting ARP Poisoning Attacks

\* Detecting Suspicious Activities in the Network

\* Preventing MITM Attacks - Methods

1. Website Hacking :

\* Burpsuite

\*SQL injection Attacks

\* Client Side attacks

\* Server side attacks

\*Information Gathering

\*Discovering and reporting Vulnerabilities

1. Vulnerability Scanning :

\*Overview

\*Scanning With Nessus

\*Scanning With Nmap

1. Reporting :

\* Documentation

\*Vulnerability Assessment

\*Pentesting Reports

\*Reporting and legal terminology

1. Cybersecurity Certifications:

\*eJPT

\*CEH

\* CCNA

\*OSCP

\*OSCE