

CYBRON

CYBRON DIPLOMA

Build Your Career in Cyber Security

International Jobs Waiting

Who can do?

- People who have done their matriculation or grade 10th passed from any recognized board or equivalent
- People who want to change their career and interested to move further in the field of Cyber Security.
- Also Feasible for Non-IT people who wants to shift their career and join in Cyber Security.

100,000+ Students have been Trained

> since 1997

Invest in
People the
only Asset
that Appreciates

Program is offered by



⊕ www.3dedudcators.com
⋈ info@3deducators.com



IMPORTANCE OF THE PROGRAM

Several students are willing to establish their careers in the Cyber Security field. Unfortunately, they would not be able to have the right directions and guidelines. The courses or curriculums that are been running normally in schools, colleges, and universities are mostly obsolete and out of market. Therefore, after completing their studies; Industries are not accepting the students, as they have spent many years in studies. Further, Emerging technologies have changed the doing of work in the offices and industries and new methodologies and systems are replacing the oldest ones. Today, they need skilled people who are robust, result-oriented, and know about the latest trends in technologies and systems. Organizations need effective and knowledgeable candidates who can work smartly and complete the jobs on time. Therefore, to survive in the local or international market they need to understand the latest technologies at all levels and learn about how to deliver projects/assignments in time.

After detailed observations of our team under the leadership of Dr. M. Shaheer Waqar, who is the founder of Cybron as well, established one of the leading learning frameworks regarding cyber security from the grassroots level with curriculums and syllabus from class 6th standards till professional level.

The purpose of the framework is to provide the concrete and required knowledge set to different standard grades of classes and equip them regarding cyber security measures with positive mindsets. There is a huge gap between academia and learning schools, and we cannot fill this gap alone. Therefore, we all need to make positive efforts to develop a cyber-secure society.

How it is possible? So there is only one way to fill this gap which is to enable our students and professionals who must know the recent technologies inside and be skilled to perform, manage, and control the technology.



According to the above discussion, the Cybron diploma is announced through Cybron International UK, which covers the major subjects of cyber security and provides a complete set of knowledge according to the market requirements. This diploma in cyber security in Karachi is conducted by top-notch professionals, who have around more than 20 years of expertise and experience in the same fields. The cyber security courses are the best cyber security covers which couple with the different technologies. Around 330 credit hours, of course, shall be completed in one an half year time period, and this cyber security diploma in Pakistan other people can do live online as well, even though from all over the world the people can join this program and establish their careers in the most required field of cyber security.

List of Courses

Cybron - Introduction to IT Fundamentals

Cybron - Introduction to Computer Networks

Cybron - System Administration & Security

Cybron – Network Administration & Security

Cybron - Cyber Security Fundamentals

Cybron – Web Front End Development & Security

Cybron – Web Back End Development & Security

Cybron - Cyber Security +

Cybron - True Blue Hacking

Cybron - True Blue Hacking +

3D EDUCATORS has the privilege to offer the Cybron Diploma from the accreditation of UK Cybron International first time in Pakistan. It helps Organizations and individuals to work on cyber security in a specialized way, where it also helps management at all levels to have a great and skilled task force of IT & Cyber Security to Secure the organization in the best way.



Program Benefits to / Pre-Requisite:

QUALIFICATIONS

- 10th grade and Equivalent Qualifications
- Basic Knowledge of Computers
- Get the appropriate Cybron Diploma from Cybron UK
- International Recognition

INDIVIDUALS

 Can get the benefits to have an advanced skills Cyber security through one and half year diploma

JOB OPPORTUNITY

 People who have completed their diploma, they can be able to get the job in the professional world in easiest way. Further, Program can be accepted locally and globally as well.



Table of Content

Detail

Inauguration

CYBRON Diploma Structure

Benefits to whom

Topics & Time Allocation

About the Program

Complete Syllabus

Passing Criteria

Online Live Instructor Led Classes



Inauguration

The CYBRON DIPLOMA will be inaugurated by a senior faculty member of 3D-EDUCATORS.

Program Structure

Total Courses	10
One Credit Hour	10 Learning Hours
Total Credits Required	33 Credit Hours
Per Course Certification	Possible
Total Hours	330 Hours
Total Duration	One Year
Required Courses to Get Diploma	10

ENROLLMENT

One time enrollment is required to start the CYBRON DIPLOMA, once the candidate completes his/her 10 courses then S/he is eligible for Diploma from Concerned Body and CYBRON INTERNATIONAL UK through 3D EDUCATORS.



FURTHER BENEFITS OF THE PROGRAM

- Organization's management required strategic IT & Cyber Security Skills at all levels, this Program encourage the IT People for betterment of the organization.
- The student will equip in the particular area of IT and also opt the knowledge of Cyber Security for their better career.
- Individuals like to increase their profile for good future, this program will also give the clear and right direction to select the right pathways.
- The program also allows to all organization to make the culture of training & development and increase the productivity of the organization.
- The program helps to motivate teams and build their capabilities according to the requirement.
- It will boost the economy in the society and helps to transfer skills from people to people.
- The programs also enable the student efficiency level through different technology tools and methodologies.
- This program will also help the organization in respect of skilled human resources.



OTHER LEARNING ACTIVITIES:

Practical Assignments of each Course	1
Learning Activities in each course	1
For Applying Certification Final Presentations Shall be given by each Trainee of at Least TWO HOURS	1
For Applying YPP Question Answer Session one hour	1
One Final Project Submitted By Each Trainee of In Hard and soft Form (Two Copies)	1



PROGRESSION OF THE PROGRAM

CYBRON DIPLOMA PROGRAM

Total Credentials = 330 Credit Hours

One Credit Hours = 10 Learning hours

Completion of 10 Courses = Eligible for Cybron - Diploma in

Cyber Security

Final Assessment The criteria is to develop the provided

assignments on the basis of course.

Awarding of Cybron Diploma in Cyber Security

Once the participants shall achieve 10 Courses / 33 Credits-hours, then S/he will be able to apply to receive the CYBRON DIPLOMA from CYBRON UK



DIPLOMA IN INFORMATION TECHNOLOGY & CYBER SECURITY

S.No	Course	Course Name	Course Hours
	ID		
1	CyD7501	Cybron - Introduction to Computer Fundamentals	33 Hours
2	CyD7502	Cybron - Introduction to Computer Networks	33 Hours
3	CyD7503	Cybron - System Administration & Security	33 Hours
4	CyD7504	Cybron – Network Administration & Security	33 Hours
5	CyD7505	Cybron – Cyber Security Fundamentals	33 Hours
6	CyD7506	Cybron – Web Front End Development	33 Hours
7	CyD7507	Cybron – Web Back End Development	33 Hours
8	CyD7508	Cybron – Cyber Security +	33 Hours
9	CyD7509	Cybron – True Blue Hacking	33 Hours
10		Cybron – True Blue Hacking +	33 Hours
	CyD7510		
Total H	lours		330 Hours



Subject	Total	Theory	Practical Hours	Grade A+, A, B, C,
SEMESTER – I	Teaching	Hours		D, E
Duration 6 Months	Hours			
Cybron - Introduction to	33 Hours	12 Hours	21 Hours	Assessment Based
Computer Fundamentals				on Performance
Cybron - Introduction to	33 Hours	16 Hours	17 Hours	Assessment Based
Computer Networks				on Performance
Cybron - System	33 Hours	12 Hours	21 Hours	Assessment Based
Administration & Security				on Performance
Cybron – Network	33 Hours	12 Hours	21 Hours	Assessment Based
Administration & Security				on Performance
TOTAL GRADE				How many Grades

Subject SEMESTER – 2 Duration 6 Months	Total Teaching Hours	Theory Hours	Practical Hours	Grade A+, A, B, C, D, E
Cybron – Cyber Security Fundamentals	33 Hours	25 Hours	07 Hours	Assessment Based on Performance
Cybron – Web Front End Development & Security	33 Hours	05 Hours	28 Hours	Assessment Based on Performance
Cybron – Web Back End Development & Security	33 Hours	05 Hours	28 Hours	Assessment Based on Performance
TOTAL GRADE				How many Grades



Subject SEMESTER – 3 Duration 6 Months	Total Teaching Hours	Theory Hours	Practical Hours	Grade A+, A, B, C, D, E
Cybron – Cyber Security +	33 Hours	25 Hours	07 Hours	Assessment Based on Performance
Cybron – True Blue Hacking	33 Hours	05 Hours	28 Hours	Assessment Based on Performance
Cybron – True Blue Hacking +	33 Hours	05 Hours	28 Hours	Assessment Based on Performance
TOTAL GRADE				How many Grades



COURSE ID: CYD7501 - INTRODUCTION TO COMPUTERS FUNDAMENTALS

Module 1: Introduction to Computers

1.1 Overview of Computer Systems

Definition and components of a computer

Types of computers (desktops, laptops, servers, mobile devices)

1.2 Operating Systems

Functions and types of operating systems

Basic navigation and file management in popular OS (Windows, Mac OS, Linux)

Module 2: Hardware Basics

2.1 Computer Components

CPU, RAM, storage devices, input/output devices

How hardware components work together

2.2 Networking Basics

Introduction to networks (LAN, WAN, Internet)

Basic networking hardware (routers, switches)



Module 3: Software Fundamentals

3.1 Types of Software System software vs. application software

Introduction to common software applications (word processors, spreadsheets)

3.2 Software Installation and Maintenance

How to install and uninstall software Basic troubleshooting techniques

Module 4: Introduction to Cybersecurity

4.1 Importance of Cybersecurity

Overview of cybersecurity and its relevance in today's digital world

4.2 Common Threats and Vulnerabilities

Types of cyber threats (malware, phishing, ransomware)

Understanding vulnerabilities in systems and networks

Module 5: Security Measures and Best Practices

5.1 Password Security

Importance of strong passwords

Password management tools and practices



5.2 Safe Internet Practices

Identifying secure websites (HTTPS) Safe browsing habits .3 Antivirus and Anti-malware Software

Overview of security software

How to use and configure security tools

Module 6: Data Protection and Privacy

6.1 Data Backup and Recovery

Importance of data backup

Methods for backing up data (cloud, external drives)

6.2 Understanding Privacy Issues

Personal data protection laws (GDPR, CCPA)

Managing personal information online

Module 7: Emerging Trends in Technology and Security

7.1 Cloud Computing

Introduction to cloud services (IaaS, PaaS, SaaS)

Security considerations in cloud computing



7.2 Future of Cybersecurity

Current trends and emerging technologies (AI, IoT security)

Module 8: Practical Applications and Case Studies



COURSE ID: CYD7502 - INTRODUCTION TO COMPUTERS NETWORKS

Module 1: Introduction to Computer Networks 1.1 What is a Computer Network?

Definition and importance of networking Types of networks (LAN, WAN, MAN, PAN)

1.2 Network Topologies Common topologies (star, bus, ring, mesh) Advantages and disadvantages of each topology

Module 2: Network Components 2.1 Networking Hardware Routers, switches, hubs, and bridges Network interface cards (NICs) and their roles

2.2 Cabling and Transmission Media
Types of cables (Ethernet, fiber optics, coaxial)
Wireless transmission technologies (Wi-Fi, Bluetooth)

Module 3: Networking Protocols 3.1 Introduction to Protocols 3.2 Common Networking Protocols

TCP, UDP, IP, HTTP/HTTPS, FTP, DHCP, DNS Understanding how these protocols function Module 4: Internet and IP Addressing



Module 4: Internet and IP Addressing 4.1 The Internet and Its Architecture Overview of the Internet structure Understanding ISPs and data centers

4.2 IP Addressing IPv4 vs. IPv6 addressing Subnetting and CIDR notation

Module 5: Network Security Fundamentals
5.1 Importance of Network Security
Overview of security in networking
Common threats to network security (e.g., unauthorized access, DoS attacks)

5.2 Security Principles Confidentiality, integrity, availability (CIA triad) Defense-in-depth and layered security strategies

Module 6: Securing Networks
6.1 Firewalls and Intrusion Detection Systems (IDS)
Types of firewalls (hardware vs. software)
How IDS and IPS work

6.2 Virtual Private Networks (VPNs)
Understanding VPNs and their uses
Configuring and using VPNs for secure remote access

Module 7: Wireless Network Security 7.1 Security Challenges in Wireless Networks

Common vulnerabilities in Wi-Fi networks Risks associated with public Wi-Fi



7.2 Securing Wireless Networks

Implementing WPA3 and other security protocols Best practices for securing Wi-Fi networks

Module 8: Emerging Trends in Network Security
8.1 Current Threat Landscape
Overview of recent trends in cyber threats
Social engineering and its implications for network security

8.2 Future of Networking and Security Introduction to Software-Defined Networking (SDN) and network function virtualization (NFV)

Impact of AI and machine learning on network security Module 9: Practical Applications and Case Studies



COURSE ID: CYD7503 - SYSTEM ADMINISTRATION AND SECURITY

Installing and Configuring Windows Server 2022 Installing and Configuring Windows Server 2022

Course Introduction

- Instructor Introduction
- Course Overview
- Prerequisites
- Certification
- Overview

Installing and Configuring Windows Server 2022 Module 2 Best Course Practices

- Lab Setup
- Building Your Own Environment
- Presentation Types
- Chapter Review

Installing and Configuring Windows Server 2022 Module 3 Windows Server 2022 Installation

- Available Editions
- Requirements
- Server Manager Overview
- Best Practice Analyzer



- Installing Server 2012
- Performing a Windows Server 2022 Installation
- Windows Server 2022 Standard Configurations
- Server Manager Roles
- Remote Management Configuration
- Installation Review
- Chapter Review

Installing and Configuring Windows Server 2022 Module 4 Windows Server 2022 CORE

- Introduction to Windows Server 2022 CORE
- Minimum Server Interface
- Server Core Management
- CORE Roles
- Installation Options
- Installing and Configuring Server CORE
- Chapter Review

Installing and Configuring Windows Server 2022 Module 5 Windows Server 2022 Server Manager

- Dashboard Overview
- Servers
- Roles and Features
- Server Manager Creation and Configuration
- Server Manager Toolbar
 - Local Server Management



- Configuring Server Manager Toolbar
- Chapter Review

Installing and Configuring Windows Server 2022 Module 6 Server Manager PowerShell

- Server Core Management Tools
- Windows PowerShell ISE Tool3



Installing and Configuring Windows Server 2022 Module 7 PowerShell Basics

- What is PowerShell
- Remoting
- Commands Cmdlets
- Server Administration
- Remote Server Administration
- PowerShell ISE
- Scripting
- More PowerShell Features
- Chapter Review

Installing and Configuring Windows Server 2022 Module 8 Windows Server 2022 Network DHCP

- Networking
- Network Components
- T CP/IPDHCP
- DHCP
- Installation
- IP and DHCP Tools
- DHCP Configuration
- Chapter Review

Installing and Configuring Windows Server 2022 Module 9 Windows Server 2022 Network Configuration IPv4

IPv4 Basics



- IPv4 Addressing
- IPv4 Sub netting
- Network Adapter Settings
- Network Settings through the GUI
- Network Settings from a Command Line
- Chapter Review

Installing and Configuring Windows Server 2022 Module 10 Windows Server 2022 Network Configuration IPv6

- IPv6 Basics
- IPv6 Addressing
- IPv6 Simplification and Equivalents
- IPv6 Network Configuration
- Transition Technologies
- Configuring ISATAP
- Chapter Review

Installing and Configuring Windows Server 2022 Module 11 Windows Server 2022 Network DNS

- DNS Basics
- Zone Records and Types
- Records
- Name Resolution4
- DNS Installation and Configuration
- DNS Query



- DNS Tools
- Working with DNS Tools
- Chapter Review

Installing and Configuring Windows Server 2022 Module 12 Windows Server 2022 Hyper-V

- Basic Overview of Virtualization
- What is Server Virtualization?
- Desktop Virtualization
- Presentation Virtualization
- Application Virtualization
- USV Virtualization
- Cloud Computing
- System Requirements
- Installing the Hyper-V Role
- Installing Hyper-V
- Configuring Hyper-V
- Managing Virtual Networks
- Configuration Settings In Hyper-V



Installing and Configuring Windows Server 2022 Module 13 Windows Server 2022 Active Directory Domain Services

- Active Directory Accounts
- Active Directory Administration
- Creating Active Directory User Account
- Active Directory Templates
- Creating a Template
- Command Line Tools
- PowerShell Scripting
- Adding Users and Groups In PowerShell
- Chapter Review

Installing and Configuring Windows Server 2022 Module 14 Windows Server 2022 AD Objects and Groups

- Groups
- Group Scope
- Default Groups
- Creating Groups
- AD DS Permissions
- AD DS Delegation
- Chapter Review

Installing and Configuring Windows Server 2022 Module 15 Windows Server 2022 Local Storage

- Active Directory Accounts
- Storage Basics



- Drive Types
- Volumes5
- File System
- Creating Mounts and Links
- Chapter Review

Installing and Configuring Windows Server 2022 Module 16 Windows Server 2022 Storage Spaces

- Storage Spaces
- High Available Virtual Disk
- Advanced Configuration
- Advanced Storage Space Management
- Working with Storage Space
- Chapter Review

Installing and Configuring Windows Server 2022 Module 17 Windows Server 2022 Files Folders Shadow Copy

- NTFS Permissions
- File/Folder Permissions
- File/Folder Rights
- Effective Permissions
- File/Folder Creation and Configuration
- Shadow Copies
- Creating and Restoring Shadow Copies
- Chapter Review



Installing and Configuring Windows Server 2022 Module 18 Windows Server 2022 Group Policy Object Basics

- Defining GPO
- GPO History
- Practical Application
- GPO Settings
- GPO Types
- GPO Overview
- Chapter Review

Installing and Configuring Windows Server 2022 Module 19 Windows Server 2022 GPO Central Store

- Storage of GPO
- Central Store
- Administrative Templates
- Multiple Local GPO
- Policy vs. Preference
- Managed vs. Unmanaged
- Creating a Central Store
- Chapter Review

Installing and Configuring Windows Server 2022 Module 20 Windows Server 2022 GPO Starter

- Building GPOs
- Available Settings6
- Export/Import



- Delegation
- Creating GPOs and Using a Starter GPO
- Chapter Review

Installing and Configuring Windows Server 2022 Module 21 Windows Server 2022 GPO Secure

- Security
- Types
- Security Template Rights
- Monitor
- Implementing Server Security
- Auditing File System Access
- Chapter Review

Installing and Configuring Windows Server 2022 Module 22 Windows Server 2022 GPO Application and Firewall

- Application Restrictions
- Software Restriction Policy
- AppLocker
- Creating AppLocker Rules
- Windows Firewall
- Windows Firewall Advanced Security
- Chapter Review



Installing and Configuring Windows Server 2022 Module 23 Windows Server 2022 Printing

- Network Printing
- Enhanced Point and Print
- V3 and V4 Drivers
- Printer Security
- Printer Pooling
- Branch Office Direct
- Installing and Configuring Printer Services
- Chapter Review

Administering Windows Server 2022 Administering Windows Server 2022 Module

Administering Windows Server 2022 Module 2 Windows Server 2022 Course Components

- Making the Best of the Course
- Lab Setup
- Building Your Own Environment
- Presentation Types
- Chapter Review

Administering Windows Server 2022 Module 3 Windows Server 2022 Active Directory Domain Services

- Domain Controller
- Virtual Domain Controller



- Deploying and Configuring
- Read Only Domain Controller (RODC)
- Installing RODC
- Chapter Review

Administering Windows Server 2022 Module 4 Windows Server 2022 AD DS and DB Management

- Active Directory
- DS Administrative Center
- DS with PowerShell
- AD DS Database
- DC States
- Using Ntdsutil
- Recycle Bin
- Using Active Directory Recycle Bin
- Chapter Review

Administering Windows Server 2022 Module 5 Windows Server 2022 AD DS Account Creation

- User Accounts
- CSVDE Account Creation
- Command Line LDIFDE
- Command Line PowerShell
- Chapter Review8



Administering Windows Server 2022 Module 6 Windows Server 2022 AD DS Account Management

- User Account Settings and Policies
- Password Policy
- Lockout Settings
- Password Policy and Account Lockout Settings
- Managing Service Accounts
- Managing Service Accounts Demonstration
- Chapter Review

Administering Windows Server 2022 Module 7 Windows Server 2022 Group Policy Object Creation

- Defining GPO
- Practical GPO Application
- GPO Types
- GPO Domain
- Implementing Group Policy
- Chapter Review

Administering Windows Server 2022 Module 8 Windows Server 2022 GPO Management

Administrative Templates



- .adm Files
- Central Store
- Folder Redirection
- Scripts
- Using Scripts and Folder Redirection
- Chapter Review

Administering Windows Server 2022 Module 9 Windows Server 2022 GPO Software

- Basic Software Deployment
- Microsoft Installer
- Deployment Methods
- Upgrades
- Managing Software with GPO
- Chapter Review

Administering Windows Server 2022 Module 10 Windows Server 2022 GPO Processing

- Basic Process
- Process Order
- Inheritance and/or Precedence
- Windows Management Instrumentation (WMI) Filters
- Slow Link No Link
- GPO Processing
- Chapter Review9



Administering Windows Server 2022 Module 11 Windows Server 2022 Data Fields

- Files
- File Server Resource Manager (FSRM)
- File Tasks
- FSRM Configuration
- Chapter Review

Administering Windows Server 2022 Module 12 Windows Server 2022 Distributed File System

- File Sharing with DFS
- DFS Namespace
- DFS Replication
- Installing DFS
- Chapter Review

Administering Windows Server 2022 Module 13 Windows Server 2022 Security and Encryption

- Encrypting File System Basics
- EFS Process
- EFS Recovery
- Advanced Auditing
- EFS and Auditing Demonstration
- Chapter Review

Administering Windows Server 2022 Module 14 Windows Server 2022 Domain Name System



- DNS Overview
- Installing and Managing DNS
- Resource Records
- Zone Types
- Zone Transfers
- Creating Zones and Zone Transfers
- DNS Management and Troubleshooting
- Monitoring and Troubleshooting

Administering Windows Server 2022 12 Module 15 Windows Server 2022 Access and Authentication

- Network Access
- Authentication vs. Authorization
- Network Policy and Access Roles
- Creating a Network Access Role
- Network Policy
- Policy Processing and Configuration
- Network Policy Configuration
- Chapter Review10

Administering Windows Server 2022 Module 16 Windows Server 2022 VPN and Direct Access

Virtual Private Network



- Tunnel Protocols
- Authentication Methods
- Connection Manager Administration KIT
- Configuring a VPN Server
- Configuring a VPN Client
- Direct Access VS VPN
- DA Components
- Configuring Direct Access
- Chapter Review

Administering Windows Server 2022 Module 17 Windows Server 2022 Network Policy Server

- NPS Overview
- Radius Server
- Radius Proxy
- Network Access Protection
- Connection Request
- Authentication
- Monitoring
- Installing, Configuring and Troubleshooting NPS
- Chapter Review

Administering Windows Server 2022 Module 18 Windows Server 2022 Network Access Protection

- NAP Overview
- Usage



- NAP Components
- NAP Policing
- System Health
- Remediation
- NAP Monitoring
- Implementing NAP
- Chapter Review

Administering Windows Server 2022 Module 19 Windows Server 2022 Windows Server Update Services

- WSUS Overview
- WSUS Process
- Deployment Components
- WSUS Management
- WSUS Installation and Configuration
- Chapter Review

Administering Windows Server 2022 Module 20 Windows Server 2022 Windows Deployment Services

- WDS Overview
- WDS Components
- WDS Installation
- WDS Deployment
- WDS Administration



- Installing and Configuring WDS
- Chapter Review

Administering Windows Server 2022 Module 21 Windows Server 2022 Monitoring

- Performance Monitor
- Task Manager
- Resource Monitor
- Event Viewer
- Monitoring Tools
- Chapter Review

Administering Windows Server 2022 Module 22 Program Review Certification Overview

- Study Recommendations
- Exam Preparation
- Course Closing

Configuring Advanced Windows Server 2012 Services Configuring Advanced Windows Server 2012 Services Module 1

Configuring Advanced Windows Server 2022 Services Module 2 Windows Server 2022 Course Specifics

- Lab Setup
- Lab Layout



Demonstration and Presentation Types

Configuring Advanced Windows Server 2022 Services Module 3 Windows Server 2022 Active Directory Domain Services

- Domain Tree
- Domain Forest
- Single Domain
- Multiple Domains
- Functional Level
- Upgrade Migrate
- Installing a Domain Controller
- Chapter Review

Configuring Advanced Windows Server 2022 Services Module 4 Windows Server 2022 ADDS Domains and Forests

- Trust Relationships
- External Trust
- Forest Trust
- Realm Trust
- Shortcut Trust
- Authentication
- SID Filtering
- Name Suffix Routing
- Creating a Child Domain and Building a Trust



Configuring Advanced Windows Server 2022 Services Module 5 Windows Server 2022 ADDS Sites

- Active Directory Sites
- Implementing ADD
- SRV Records
- Locating Local DC
- ISTG
- Active Directory Site Setup

Configuring Advanced Windows Server 2022 Services Module 6 Windows Server 2022 ADDS Replication

- AD Parts
- Types of Replication
- Conflicts
- Sysvol
- Site Topology and Site Links
- Group Membership Caching
- Tools
- Site Replication

Configuring Advanced Windows Server 2022 Services Module 7 Windows Server 2022 Networking DNS

- DNS Administration
- Management
- Queries



- Global Name Zone
- DNS Security
- DNS Advanced Configuration

Configuring Advanced Windows Server 2022 Services Module 8 Networking DHCP

- DHCP Basics
- Address Request
- Play Nice with DNS
- Scopes
- DHCP IPv4
- Name Protection
- DHCP Failover
- DHCP Advanced Configuration

Configuring Advanced Windows Server 2022 Services Module 9 Networking IPAM

- IPAM Basics
- Reason to Use IPAM
- Components
- Requirements
- Security
- Management and Monitoring

Configuring Advanced Windows Server 2022 Services Module 10 Data: Advanced File

- File and Storage Basics
- File Server Resource Manager



- File Classification
- New Options
- File Classification Configuration
- Enabling Data Reduplication IPAM Installation and Configuration

Configuring Advanced Windows Server 2022 Services Module 11 Windows Server 2022: Dynamic Access Control

- DAC Basics
- New vs Old
- Central Access Policy
- Implementing DAC
- Deploying DAC
- Implementation of Dynamic Access Control

Configuring Advanced Windows Server 2022 Services Module 12 Windows Server 2022 Data: Storage

- Storage Basics
- iSCSI Parts
- iSCSI Security
- Branch Cache
- Configuring SCSI and iSCSI Storage
- Configuring Branch Cache

Configuring Advanced Windows Server 2022 Services Module 13 Business Continuity: Backups



- Backup Basics
- Server Backup
- Online Backup
- Recovery
- Data Protection Manager
- Implementing a Windows Server Backup14

Configuring Advanced Windows Server 2022 Services Module 14 Operating System Deployment

- Task Sequence Creation
- Task Sequence Deployment
- implementing an In-place Upgrade

Configuring Advanced Windows Server 2022 Services Module 15 High Availability Network Load Balancing

- Network Load Balancing Basics
- NLB Functionality
- NLB New Features
- NLB Deployment
- Additional NLB Configuration
- Planning for NLB
- Securing NLB
- NLB Cluster Setup
- Configuring NLB Cluster
- Host Availability



Configuring Advanced Windows Server 2022 Services Module 16 High Availability Failover Clustering

- High Availability Basics
- HA New Features
- HA Components
- Features CSV
- Quorum (Modes)
- Failover Clustering
- Cluster Deployment Requirements
- Failover Cluster Setup and Configuration
- HA File Server Setup and Configuration
- Cluster Aware Updating

Configuring Advanced Windows Server 2022 Services Module 17 HA Hypervisor and VM

- HA Basics with Hyper-V
- Failover Clustering with Hyper-V
- New Features
- Migration
- SCCM
- Best Practices
- HV Replica
- Virtual Machine Cluster Setup
- Failover Cluster Configuration for Hyper-V



Configuring Advanced Windows Server 2022 Services Module 18 Access and Identity: Certificates

- Public Key Infrastructure Basics
- Components PKI Solution15
- AD CS New Features
- Certificate Templates
- Enrollment Types
- Certificate Revocation List
- Key Recovery
- Building a Root CA
- Deploying and Configuring an Enterprise Subordinate CA
- Managing Certificate Templates
- Certificate Revocation

Configuring Advanced Windows Server 2022 Services Module 19 Active Directory Federation Services

- AD FS Services
- Web Security Components
- AD FS New Features
- SSO
- Deployment
- AD FS Setup and Configuration
- Installing AD FS Role
- Installing AD FS for a Single Organization
- Configuring AD Claims Provider Trust Claims



Configuring Advanced Windows Server 2022 Services Module 20 Active Directory Rights Management

- AD RMS Basics
- RMS Usage
- AD RMS Components
- Certificates/Licenses
- AD RMS Process
- AD RMS Deployment
- Rights Policy Templates
- Creating a Super User Group and Service Group
- Installing and Configuring AD RMS
- Build and Deploy a Policy Template
- Implementing RMS Trust Policies
- Anonymous Access Setup
- Creating a Rights Protected Document

Configuring Advanced Windows Server 2022 Services Module 21 Course Review

- Course Review
- Certification Overview
- Exam Preparation



COURSE ID: CYD7504 - NETWORKING ADMINISTRATION & SECURITY

Introduction to Networks

- Networking Today
- i. Network Affects Our Lives
- ii. Network Components
- iii. Network Representations and Topologies
- iv. Common Types of Networks
- v. Internet Connections
- vi. Reliable Networks
- vii. Network Trends
- viii. Network Security
- ix. The IT Professional
- Basic Switch and End Device Configuration
- i. Cisco IOS Access
- ii. IOS Navigation
- iii. The Command Structure
- iv. Basic Device Configuration
- v. Save Configurations
- vi. Ports and Addresses
- vii. Configure IP Addressing
- viii. Verify Connectivity
- Protocol & Models
- i. The Rules
- ii. Protocols
- iii. Protocol Suits
- iv. Standards Organizations
- v. Reference Models



- vi. Data Encapsulation
- vii. Data Access
- Physical Layer
- i. Purpose of the Physical Layer
- ii. Physical Layer Characteristics
- iii. Copper Cabling
- iv. UTP Cabling
- v. Fiber-Optic Cabling
- vi. Wireless Media
- Number Systems
- i. Binary Number Systems
- ii. Hexadecimal Number Systems
- Data Link Layer
- i. Purpose of the Data Link Layer
- ii. Topologies
- iii. Data Link Frame
- Ethernet Switching
- i. Ethernet Frame
- ii. Ethernet MAC Address
- iii. The MAC Address Table
- iv. Switch Speeds and Forwarding Methods



- Network Layer
- i. Network Layer Characteristics
- ii. IPv4 Packet
- iii. IPv6 Packet
- iv. How a Host Routes
- v. Router Routing Tables
- Address Resolution
- i. MAC and IP
- ii. ARP
- iii. Neighbor Discovery
- Basic Router Configuration
- i. Configure Initial Router Settings
- ii. Configure Interfaces
- iii. Configure the Default Gateway
- IPv4 Addressing
- i. IPv4 Address Structure
- ii. IPv4 Unicast, Broadcast and Multicast
- iii. Types of IPv4 Addresses
- iv. Network Seamentation
- v. Subnet and IPv4 Network
- IPv6 Addressing
- i. IPv4 Issues
- ii. IPv6 Address Representation
- iii. IPv6 Address Types
- iv. GUA and LLA Static Configuration
- v. Dynamic Addressing for IPv6 GUAs
- vi. Dynamic Addressing for IPv6 LLAs
- vii. IPv6 Multicast Addresses, Subnet an IPv6 Network



- ICMP
 - i. ICMP Messages
 - ii. Ping and Traceroute Testing
- Transport Layer
 - i. Transportation of Data
 - ii. TCP Overview
 - iii. UDP Overview
 - iv. Port Numbers
 - v. TCP Communication Process
 - vi. Reliability and Flow Control
 - vii. UDP Communication
- Application Layer
 - i. Application, Presentation and Session
 - ii. Peer-to-Peer
 - iii. Web and Email Protocols
 - iv. IP Addressing Services
 - v. File Sharing Services
- Network Security Fundamentals
 - i. Security Threats and Vulnerabilities
 - ii. Network Attacks
 - iii. Network Attack Mitigation
 - iv. Device Security
- Build a Small Network
 - i. Devices in a Small Network
 - ii. Small Network Applications and Protocols
 - iii. Scale to Larger Networks
 - iv. Verify Connectivity
 - v. Host and IOS Commands
 - vi. Troubleshooting Methodologies
 - vii. Troubleshooting Scenarios



Switching, Routing & Wireless Essentials

- Basic Device Configuration
- i. Configure a Switch with Initial Settings
- ii. Configure Switch Ports
- iii. Secure Remote Access
- iv. Basic Router Configuration
- v. Verify Directly Connected Networks
- Switching Concepts
- i. Frame Forwarding
- ii. Switching Domains
- VLANs
- i. Overview of VLANs
- ii. VLAN in a Multi-Switched Environment
- iii. VLAN Configuration
- iv. VLAN Trunks
- v. Dynamic Trunking Protocol
- Inter-VLAN Routing
- i. Inter-VLAN Routing Operation
- ii. Router-on-a-Stick Inter-VLAN Routing
- iii. Inter-VLAN Routing using Layer 3 Switches
- iv. Troubleshooting Inter-VLAN Routing
- STP
- i. Purpose of STP
- ii. STP Operations
- iii. Evolution of STP



- DHCPv4 Configuration
- i. DHCPv4 Concepts
- ii. Configure a Cisco IOS DHCPv4 Server
- iii. Configure a DHCPv4 Client
- SLAAC and DHCPv6
- i. IPv6 Global Unicast Address Assignment
- ii. SLAAC
- iii. DHCPv6
- iv. Configure DHCPv6 Server
- FHRP Concepts
- i. First Hop Redundancy Protocol
- ii. HSRP
- LAN Security Concepts
- i. Endpoint Security
- ii. Access Control
- iii. Layer 2 Security Threats
- iv. MAC Address Table Attack
- v. LAN Attacks
- Switch Security Configuration
- i. Implement Port Security
- ii. Mitigate VLAN Attacks
- iii. Mitigate DHCP Attacks
- iv. Mitigate ARP Attacks
- v. Mitigate STP Attacks



WLAN Concepts

- i. Introduction to Wireless
- ii. Components of WLANs
- iii. WLAN Operation
- iv. CAPWAP Operation
- v. Channel Management
- vi. WLAN Threats
- vii. Secure WLANs
- WLAN Configuration
 - i. Remote Site WLAN Configuration
 - ii. Configure a Basic WLAN on the WLC
 - iii. Configure a WPA2 Enterprise WLAN on the WLC
 - iv. Troubleshoot WLAN Issues
- Routing Concepts
 - i. Path Determination
 - ii. Packet Forwarding
 - iii. Basic Router Configuration Review
 - iv. IP Routing Table
 - v. Static and Dynamic Routing
- IP Static Routing
 - i. Static Routes
 - ii. Configure IP Static Routes
 - iii. Configure IP Default Static Routes
 - iv. Configure Floating Static Routes
 - v. Configure Static Host Routes
- Troubleshoot Static and Default Routes
 - i. Packet Processing with Static Routes
 - ii. Troubleshoot IPv4 Static and Default Route Configuration



Enterprise Networking, Security & Automation

- Single-Area OSPFv2 Concepts
- i. OSPF Features and Characteristics
- ii. OSPF Packets
- iii. OSPF Operation
- Single-Area OSPFv2 Configuration
- i. OSPF Router ID
- ii. Point-to-Point OSPF Networks
- iii. Multiaccess OSPF Networks
- iv. Modify Single-Area OSPFv2
- v. Default Route Propagation
- vi. Verify Single-Area OSPFv2
- Network Security Concepts
- i. Current State of CyberSecurity
- ii. Threat Actors
- iii. Malware
- iv. Common Network Attacks
- v. IP Vulnerabilities and Attacks
- vi. TCP and UDP Vulnerabilities
- vii. IP Services
- viii. Network Security Best Practices
- ix. Cryptography
- ACL Concepts
- i. Purpose of ACLs
- ii. Wildcard Masks in ACLs
- iii. Guidelines for ACL Creation
- iv. Types of IPv4 ACLs



- ACLs for IPv4 Configuration
- i. Configure Standard IPv4 ACLs
- ii. Modify IPv4 ACLs
- iii. Secure VTY Ports with a standard IPv4 ACL
- iv. Configure Extended IPv4 ACLs
- NAT for IPv4
- i. NAT Characteristics
- ii. Types of NAT
- iii. NAT Advantages and Disadvantages
- iv. Static NAT
- v. Dynamic NAT
- vi. PAT
- vii. NAT64
- WAN Concepts
- i. Purpose of WANs
- ii. WAN Operations
- iii. Traditional WAN Connectivity
- iv. Modern WAN Connectivity
- v. Internet-Based Connectivity
- VPN and IPsec Concepts
- i. VPN Technology
- ii. Types of VPNs
- iii. IPsec
- QoS Concepts
- i. Network Transmission Quality
- ii. Traffic Characteristics
- iii. Queuing Algorithms
- iv. QoS Models
- v. QoS Implementation Techniques



- Network Management
 - i. Device Discovery with CDP
 - ii. Device Discovery with LLDP
 - iii. NTP
 - iv. SNMP
 - v. Syslog
 - vi. Router and Switch File Management
 - vii. IOS Image Management
- Network Design
 - i. Hierarchical Design
 - ii. Scalable Networks
 - iii. Switch Hardware
 - iv. Router Hardware
- Network Troubleshooting
 - i. Network Documentation
 - ii. Troubleshooting Process
 - iii. Troubleshooting Tools
 - iv. Symptoms and Causes of Network Problems
 - v. Troubleshooting IP Connectivity
- Network Virtualization
 - i. Cloud Computing
 - ii. Virtualization
 - iii. Virtual Network Infrastructure
 - iv. Software-Defined Networking
 - v. Controllers
- Network Automation
 - i. Automation Overview
 - ii. Data Formats
 - iii. APIs
 - iv. REST
 - v. Configuration Management Tools
 - vi. IBN and Cisco Management Centre



COURSE ID: CYD7505 - CYBER SECURITY FUNDAMENTALS

Section 1: Cyber security Introduction and Overview

Topic 1—Introduction to Cyber security

Topic 2—Difference Between Information Security and Cyber security

Topic 3—Cyber security Objectives

Topic 4—Cyber security Roles

Topic 5—Cyber security Domains

Section 1—Knowledge Check

Section 2: Cyber security Concepts

Topic 1—Risk

Topic 2—Common Attack Types and Vectors

Topic 3—Policies and Procedures

Topic 4—Cyber security Controls

Section 2—Knowledge Check

Section 3: Security Architecture Principles

Topic 1—Overview of Security Architecture

Topic 2—The OSI Model

Topic 3—Defense in Depth

Topic 5—Isolation and Segmentation

Topic 6—Monitoring, Detection and Logging

Topic 7A—Encryption Fundamentals

Topic 7B—Encryption Techniques

Topic 7C—Encryption Applications

Section 3—Knowledge Check



Topic 4—Firewalls

Topic 5—Isolation and Segmentation

Topic 6—Monitoring, Detection and Logging

Topic 7A—Encryption Fundamentals

Topic 7B—Encryption Techniques

Topic 7C—Encryption Applications

Section 3—Knowledge Check

Section 4: Security of Networks, Systems, Applications and Data

Topic 1—Process Controls—Risk Assessments

Topic 2—Process Controls—Vulnerability Management

Topic 3—Process Controls—Penetration Testing

Topic 4—Network Security

Topic 5—Operating System Security

Topic 6—Application Security

Topic 7—Data Security

Section 4—Knowledge Check



COURSE ID: CYD7506 - WEB FRONT END DEVELOPMENT

Topic 1— Overview of Web World

Topic 2—HTML (Hyper Text Markup Language)

Topic 3—CSS (Cascading Style Sheets)

Topic 4—Bootstrap

Topic 5—UI/UX Management

Topic 6—JavaScript

Topic 7—WordPress Development

Topic 8—Customized Front End Development

Topic 9—Project



COURSE ID: CYD7507 - WEB BACK END DEVELOPMENT

C#.NET WEB FORMS APPLICATIONS

Programming Concepts

Overview Object Oriented Programming

Working with C# and ASP.NET feature

Revision of Object, Overloading & Inheritance Concepts

Revision of Loops, Arrays, Sessions, Methods, Constructors & Encapsulation

Overloading, Overriding, Abstract classes, Interface, Caching

Web Application

Other features of Dot Net Applications

Database Application Using Web Forms
Understanding SQL Server Database
Connecting your Application with Database
Data Handing/Manipulating Class in C#.Net
Understanding Data Grid
Building Simple Contact Directory Application



SQL Server Data Handling

Data Manipulation Brief Overview and examples

Data Relational Overview

Computer Architecture

Database Normalization

ASP.NET WEB FORMS APPLICATIONS

Overview of HTML and CSS3

Introduction to Web Applications

How to Establish ASP.NET Web Application Rendering HTML with Server Controls Working with Controls

Introduction to Web Controls Simple Input Controls Hyperlink and Button Controls List Controls

Data Binding

Three tier architecture and encapsulation Introducing Data Source Controls Overview of ADO.NET Connecting to Data



Working with Data

Working with SQL Server 2016
Database Concepts
Introduction to SQL
Select, Insert, Update and Delete
Stored Procedure, Views and Triggers

Displaying Data with Grid-view Control Introduction the Grid-view Control Filter Data in the Grid-view Control Select from drop down list in the Grid Tree view

Validating User Input
Introduction of JavaScript
Validation and Client-Side controls
Exceptions in JavaScript
Overview of ASP.NET Validation Controls
Using the Simple Validators
Summarizing Results with Summary Control
Separating Validation into Validation Group

AJAX
AJAX Installation
ScriptManager
UpdatePanel
AJAX Client Library



Remote Method Calls
AJAX Control Toolkit
Themes and Master Pages
Creating a Consistent Web Site
Master Pages
Site Navigation

Managing State ASP.NET Session State Storing Objects in Session State Hosting (3rd Party Services)

MVC 6 Web Applications

Introduction to MVC 6

Traditional ASP.NET Web Forms Benefits of ASP.NET MVC



MVC 6 Architecture
The MVC Pattern
The MVC architecture Pattern
Domain Models and Repositories

Essential Language Features Automatically Implemented Properties Using Object and Collection Initializers Entity Framework Lambda Expressions

Working With Controllers Introduction to Controller

Model Templates
Template View Helpers
Using Metadata for Data Values

Working With View
Working with the ASPX Engine
Working with the Razor Engine

Working With URLs and Routing Converting ASPX View to Razor View



COURSE ID: CYD7508 - CYBER SECURITY +

Section 1: Security of Networks, Systems, Applications and Data

Topic 1—Process Controls—Risk Assessments

Topic 2—Process Controls—Vulnerability Management

Topic 3—Process Controls—Penetration Testing

Topic 4—Network Security

Topic 5—Operating System Security

Topic 6—Application Security

Topic 7—Data Security

Section 4—Knowledge Check

Section 2: Incident Response

Topic 1—Event vs. Incident

Topic 2—Security Incident Response

Topic 3—Investigations, Legal Holds and Preservation

Topic 4—Forensics

Topic 5—Disaster Recovery and Business Continuity Plans

Section 5—Knowledge Check

Section 3: Security Implications and Adoption of Evolving Technology

Topic 1—Current Threat Landscape

Topic 2—Advanced Persistent Threats.

Topic 3—Mobile Technology—Vulnerabilities, Threats and Risk

Topic 4—Consumerization of IT and Mobile Devices

Topic 5—Cloud and Digital Collaboration

Section 6—Knowledge Check



COURSE ID: CYD7509 - CYBRON TRUE BLUE HACKING

- 1. Introduction to Ethical Hacking
- 2. Foot-printing & Reconnaissance Technology Brief
- 3. Scanning Networks
- 4. Services Enumeration using
- 5. Vulnerability Analysis Technology Brief Vulnerability
- 6. System Hacking Technology Brief System Hacking
- 7. Malware Threats Technology Brief
- 8. Sniffing
- 9. Social Engineering
- 10. Denial-of-Services
- 11. Session Hijacking
- 12. Evading IDS, Firewall and Honeypots
- 13. Hacking Web Servers Technology Brief Web server Concepts
- 14. SQL Injection Technology Brief SQL Injection Concepts
- 15. Hacking Wireless Networks Technology Brief Wireless Concepts
- 16. Hacking Mobile Platforms Technology Brief Mobile Platform Attack Vectors
- 17. IoT Hacking
- 18. Cloud Computing
- 19. Cryptography Technology Brief Cryptography Concepts



COURSE ID: CYD7510 - CYBRON TRUE BLUE HACKING +

Advanced Penetration Testing Techniques

- Reconnaissance
- Scanning and Enumeration
- Gaining Access
- Maintaining Access

Web Application Security

- OWASP Top Ten vulnerabilities
- Web application penetration testing tools
- Secure coding practices

Network Security

- Advanced network attacks and defenses
- Intrusion detection and prevention systems
- Firewalls and VPNs

Malware Analysis

- Types of malware and their behavior
- Reverse engineering malware
- Analyzing malware in a lab environment

Cloud Security

- Security challenges in cloud computing
- Securing cloud environments



Cloud-specific attacks

Social Engineering

- Techniques used in social engineering attacks
- Psychological principles behind social engineering
- Mitigation strategies

Wireless Security

- Securing wireless networks
- Attacks against wireless networks
- Tools for wireless penetration testing



TERMS & CONDITIONS

WITHDRAWAL FROM THE DIPLOMA IN IT AND CYBER SECURITY

Students are not allowed to withdraw from the above Program. If a student cannot continue the program, the fee will be forfeited.

CONDUCT AND DISCIPLINE

A disciplinary action, leading to rustication, will be taken against students whose conduct is found objectionable at any time during the course of study. Reference will be made to 3D Educators code of conduct.



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ASSESSMENT OF PROGRAM (ONLINE)

- The paper will be open book and student can give the answers according to scenarios
- The paper will be divided into two categories, one is practical and another is theory.
- Practical assessment will be 70% of the paper weight, where rest of 30% will be taken theory.
- Practical assessment will be taken in labs by doing practically, where theory paper will be taken through online methodology.
- Those candidate who cannot be able to give the online test and they do not have the facility of
 it, then on the exceptional basis the paper can be taken as paper based examination.
 Otherwise, center must have the facility to provide online test mechanism to students and
 facilitate for the final assessment.
- The program assessment will be taken through online methodology

EVALUATION AND GRADING

- The performance of students is evaluated through continuous observation of a student's performance in the CERTIFICATION/DIPLOMA/YPP – class participation, submission of assignments, quizzes and exercises.
- The student will be examined through exams conducted by 3D or BOARD. Total marks for passing the CERTIFICATION/DIPLOMA/YPP will be 33 out of a total of 100.
- Students who do not meet the attendance or any other eligibility criteria will not be allowed to appear in the final examination.
- The following grading plan will be applicable for the CERTIFICATION/DIPLOMA:

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85-100	80-84.9	75-79.9	70-74.9	60-69.9	Below 60

Students who are unable to appear for the final exam are required to submit a written application stating the reason for not appearing for the exam. 3D EDUCATORS and their partners reserves the right to approve or deny such applications. If approved, the student will be allowed to sit for the exam within one month. Failure to do so, the student will be resubmit the examination fee and sit the future schedule exam. Without passing of the exams no certification will be awarded.



PRECAUTIONARY MEASURES

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- Kindly Switch Off your Cell Phone during the class, because it will disturb the quorum of class.
- If you have taken the admission in the course online lonely, then ethically it is recommended and suggested that you alone in the class.
- Recording of Lectures are not allowed at your end.

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