

## 2022/ITES/NIELIT/05520: Certified Networking And System Specialist

<b>Course :</b>	Certified Networking And System Specialist
<b>Code :</b>	2022/ITES/NIELIT/05520
<b>Starting Date :</b>	03/10/2023
<b>Last Date To Apply :</b>	20/09/2023
<b>Contact Person :</b>	Mr. Bhargav Deshmukh, Mob No. 9049565944

### Course Preamble

Almost Every sector of industry OR education requires networking in some or the other way. In the business sector, networking is applicable from manufacturing to business processing. As organizations and institutions invest in domains like technology, cloud computing, big data, etc. they all depend on a workforce with networking skills to make the most of this technology. Today the supply of networking workforce does not match with the demand, due to which in the future these professionals will discover opportunities for the growing economy.

### Course Objective

The objective of this course is to enabling the student with basic knowledge on the Networking (Routing and Switching), Microsoft Windows Server 20XX, Linux Server etc

#### The Main Objectives:-

- To understand the Practical Implementation of LAN Network, Routing and Switching.
- Installation, Configuration and Maintenance of Windows Server 20XX.
- Installation, configuration and Maintenance of Linux Server.

### Course Outcomes

- Design and Configure LAN network
- Installation, Configuration and Maintenance of Windows Server 20XX.
- Installation, configuration and Maintenance of Linux Server.

## Course Structure

Sr. No.	Module Name	Duration		
		Theory	Practical	Total
1.	<b>Develop skills to Design, Configure, Implement, Maintain and Troubleshoot a Network</b>	49	67	116
2.	<b>Develop skills to implement Client Server Network using Windows Server 2000X</b>	42	74	116
3.	<b>Develop skills to implement Client Server Network using Linux Operating System</b>	42	74	116
4.	<b>CCNA Curriculum based project</b>	0	12	12
	<b>Total</b>	136	234	360 hrs

## Course Contents

### **Develop skills to Design, Configure, Implement, Maintain and Troubleshoot a Network**

Fundamentals Computers associated with Networking, What is a Computer Network, Network types, topologies, Standards, Concept of Data Centres, SDN and various certification in Computer Networks, What is cloud Computing, types of Cloud, Uses of Cloud Computing, Associated tools and Techniques used in Cloud Computing, Career Certifications in Cloud Computing., Cyber Security overview, Concept of SOC, SOAR, SIEM etc in Cyber Security, Compliances in Cyber Security, Various Certifications in Cyber Security, Ethernet Fundamentals and Cabling, Three-Layer Hierarchical Architecture, Networking Basics, ISO-OSI Reference Model , TCP / IP Protocol Model, Introduction to WPAN, LAN, MAN, WAN., IP Addressing, IP Address Types, Subnetting and Classless Inter Domain Routing (CIDR), Variable Length Subnet Masking(VLSM), Practical design problems in networks,

### **Develop skills to implement Client Server Network using Windows Server 2000X**

Installing Windows Sever and its Configuration, Managing Local Storage, Remote login Management, Coverage of File and print Services in detail, Installation of Domain Controllers and its Management, , Installation of Active Directory Services and its Management, Active Directory , Domain Services Object, Configuration of Group Policies, Group Policy Objects, Group Policy Preferences, Account Policies, Security Policies, Application Security Policies and Windows Firewall. Windows Deployment Service ,Patch Management, Monitoring events, Configure Network Monitoring, Performance ,Install and configure File Server Resource Manager, Bit Locker Encryption and Policies, Audit Policies and Advance Concepts in Auditing, Configuring and managing DHCP Server, DNS Server Network Policy Server, Web Server, FTP Server and other relevant secure protocols associated., Configuring VPNs, Configuring and managing Hyper-V in detail, Virtual Machine Storage Concept, Configure Virtual networks, Backup and Restore

## **Develop skills to implement Client Server Network using Linux Operating System**

Shell Prompt and Basic Commands, Input-output Redirection, Regular Expressions, Grep Command usage, Usage of help / wildcards, Usage of tar, gzip and bzip2 for compression, decompression, zip and unzip utilities, Create, delete, copy, and move files and directories, Usage of hard links and soft links, File Permissions, Basics of File System, Creation and deletion of partitions,, Usage of LVM, Concept of Disk quotas, Swap Space, UUIDs, Installing and updating Software packages,, Usage of rpm, yum and apt, Process management in Linux, At and cron scheduling tasks, Configuration of time services, Basic Networking Concept in Linux, Configure Firewall settings, Using SSH for remote login,, Advance concepts in SSH, Concept of SELinux, Detailed Usage of SELinux, Linux Installation, Usage of Kickstart in installing Linux,, Advance installation concepts, Run levels in Linux, Shell Scripting Concepts, Virtualization in Linux, Firewalls and ip tables, Apache Web Server, DHCP Server, DNS Server, Vsftpd ftp server, Syslog Server, Postfix Mail Server, Samba Server, NFS Server, Squid Proxy Server and other secure versions of the protocols

### **CCNA Curriculum based project**

#### **Course Fees**

- NIL for SC/ST
- 18,000 for Others

#### **Eligibility**

12<sup>th</sup> Pass

#### **Important Dates**

Last Date Of Registration : 20/09/2023

Course Starting Date : 03/10/2023

**Note : Admission will be on first come basis.**