

# National Institute of Electronics and Information Technology Lucknow

**Name of Group:** IT Division

**Name of Course:** Certificate Course in Network Administration

**Objective:** This training covers the syllabus of Cisco Certified Network Associate (CCNA) Exam and tests a candidate's knowledge and skills required installing, operating, and troubleshooting a small to medium size enterprise branch network. The topics include connecting to a WAN; implementing network security; network types; network media; routing and switching fundamentals; the TCP/IP and OSI models; IP addressing; WAN technologies; operating and configuring IOS devices; extending switched networks with VLANs; determining IP routes; managing IP traffic with access lists etc..

**Duration:** 6 Weeks

**Eligibility:** 12<sup>th</sup> Passed

**Course Fees (Proposed):** Rs. 6000/- (Plus GST)

**Registration Process:** Candidates have to apply in prescribed application form. The forms can be collected from NIELIT Lucknow centre. The duly filled form along with the course fees has to be submitted at NIELIT Lucknow centre. The Fees deposited is Non-Refundable.

## **Course Content:**

Duration	Content
1Week	Living in a Network Centric World, Communicating Over the Network, OSI Reference Model, Application Layer Functionality and Protocols, OSI Transport Layer, OSI Network Layer, OSI Physical Layer, Ethernet, Data Link Layer, Addressing the Network-IPv4, Planning and Cabling Networks, Configuring and Testing Your Network.
1Week	STP (Shielded Twisted Pair), UTP (Unshielded Twisted Pair) ,Coaxial Cable, Cabling Standards for LAN using UTP Cable, How to do Crimping, Building Straight Through Cable and Cross Cables, Testing Cable Continuity. Twisted pair, Coaxial Cable, Optical Fibers, Wireless Transmission, Microwave, Radio Waves and their respective connectors.
1Week	Analog Transmission, Digital Transmission, Five Components of data transmission, characteristics of data communication, Modes of data Transmission- Simplex Half duplex / Full Duplex. Synchronous & Asynchronous Data Communication. Types of Network LAN, MAN, WAN
1Week	LAN Design, Basic Wireless concepts and configuration, Basic Switch concepts and configuration, VLANS, VTP, STP, Inter-VLAN Routing, WAN, Circuit switching, Packet switching, Frame relay, ATM, ISDN, Fundamentals of WAN PROTOCOLS , Introduction and configuration of PPP, Introduction to Frame Relay, PVC, SVC, ATM, Introduction to ISDN BRI,
1Week	What is TCP/IP, Comparison of OSI layer and TCP/IP suite What is Network Addressing, Functionality of IP, TCP, UDP, ICMP protocols, Understanding FTP, Telnet, SMTP, SNMP – upper layer protocols, IP addressing scheme, What is subnetting, Configuring Subnet mask ,Routing Internal & External components, Booting up process, Different modes of Router
1Week	Routing algorithms, Routing tables/routing protocols, IP Routing, Static Routing, Dynamic Routing, Introduction to Routing Protocols, Configuring RIP, Configuring IGRP,

	Configuring EIGRP, Use of CISCO IOS trouble Shooting Commands Using TFTP for taking Backup of IOS and configurations, Design and implementation of networking using above technology
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- \* There will be 3 Hours Session per day.
- \* These sessions will include Theory Classes, Demo and Practical.

**Mode of Payment:** Fees can be paid either by swiping debit/credit card.

For any queries and more details please contact Pawan Verma on **7706009310**