

Course Overview: *The CCNA course indicates a foundation in and apprentice knowledge of networking. An individual that has the CCNA certification can install, configure, and operate LAN, WAN, and dial access services for small networks (100 nodes or fewer), including but not limited to use of these protocols: IPV4 , IPV6, EIGRP, Serial, Frame Relay, VLANs, OSPF v2 , OSPF v3, Ethernet, Access List. Our CCNA program is designed to prepare candidates for today's associate-level*

WEEK	MODULE	TOPIC	HOURS	OBJECTIVES
Week 1	1.0. Network Fundamentals	1.1. Introduction to Internetworking 1.2. Network Components 1.3. Network Topologies	2.0	This Module Explains the role and function of network components Routers, L2 and L3 switches, Next-generation firewalls and IPS, Access points etc. Describes the characteristics of network topology architectures
Week 1		1.4. Network Models 1.5. Introduction to IP Protocols 1.6. Layer 1 Technology 1.7. Layer 2 Technology	2.0	This Module describes and compare physical interface and cabling types, Selecting the appropriate Cabling type based on Implementation Requirement. Compares TCP to UDP, explains network models, Identify interface and cable issues (collisions, errors, mismatch duplex, and/or speed)
Week 2		1.8. IP Addresses 1.9. Easy Subnet	2.0	This Module will explain IPv4 addressing, Describe the need for private IPv4 addressing, Configure and verify IPv6 addressing and prefix. Also Compare IPv6 address types: Global unicast, Unique local, Link local, Modified EUI 64 etc. Subnetting Basics, How to create Subnet, Subnet Mask and CIDR, Class B,C Subnetting, Troubleshooting IP Addressing.
Week 2		1.10. Troubleshooting of IP 1.11. Cisco IOS 1.12. Managing Cisco IOS. Managing Cisco Devices	2.0	This Module Verifies IP parameters for Client OS (Windows, Mac OS, Linux). Explanation of Cisco Router IOS, Configuring Administrative Functions, Managing Cisco Devices, Identification of Router component. Backing up and Restoring IOS. Backing up and Restoring Configuration. Password Recovery
Week 3	2.0. Network Access	2.1. Ethernet Networking 2.2. Data Encapsulation 2.3. Configuration of Switches 2.4. Virtual Local Area Network (VLAN)	2.0	This Module Interprets Ethernet Frame Format, Describe switching concepts: MAC learning and aging, Frame switching, Frame flooding, MAC address table. Configure and verify VLANs (normal range) spanning multiple switches: Access ports (data and voice), Default VLAN. Configure and verify interswitch connectivity: Trunk ports, 802.1Q, Native VLAN

WEEK	MODULE	TOPIC	HOURS	OBJECTIVES
Week 3		2.5. Cisco Discovery Protocol (CDP/LLDP) 2.6. EtherChannel (LACP) 2.7. Spanning Tree Protocol (STP) 2.8. WLAN Positioning	2.0	Configuration and verification of Layer 2 discovery protocols (Cisco Discovery Protocol and LLDP), Configure and verify (Layer 2/Layer 3) EtherChannel (LACP), Describe the need for and basic operations of Rapid PVST+ Spanning Tree Protocol and identify basic operations: Root port, root bridge (primary/secondary), and other port names, Port states (forwarding/blocking), PortFast benefits
Week 4	3.0. IP Connectivity	3.1. Introduction to IP Routing 3.2. Routing Table 3.3. Static Routing/Floating Static 3.4. Dynamic Routing 3.5. RIPV1/RIPV2	2.0	This module Interprets the components of routing table: Routing protocol code, Prefix, Network mask, Next hop, Administrative distance, Metric etc. Determine how a router makes a forwarding decision by default: Longest match, Administrative distance. Configure and verify IPv4 and IPv6 static routing: Default route, Network route, Floating static
Week 4		3.6. OSPFv1. 3.7. WAN Technology 3.8. HDLC, PPP and Frame Relay 3.9. Introduction to VPN	2.0	This module explains and differentiate the various Wide Area Network Technology, Configuration and verification of single area OSPFv1, OSPFv2: Neighbor adjacencies, Point-to-point, Broadcast (DR/BDR selection), Router ID.
TOTAL			16	