

# CS4471 (Spring 2024)

# Reading and Lab Assignments (version 1.1)

Week# (Date)	Lecture	Lab Assignments
week1 Jan24	Vol 1 Part I: Intro to Networking CCNAv1 Chapter 1: <a href="#">Intro to TCP/IP Networking</a> CCNAv1 Chapter 2: <a href="#">Fundamentals of Ethernet LANS</a>  Sybex Chapter 1: Internetworking Sybex Chapter 2: Ethernet Networking & Data Encapsulation Sybex Chapter 3: Introduction to TCP/IP	Enroll into Cisco Network Academy, view Introduction to Packet Tracer course, and download Packet Tracer at <a href="https://www.netacad.com/courses/packet-tracer">https://www.netacad.com/courses/packet-tracer</a> or <a href="https://www.netacad.com/courses/packet-tracer/introduction-packet-tracer">https://www.netacad.com/courses/packet-tracer/introduction-packet-tracer</a>
week2 Jan31	CCNAv1 Chapter 3: <a href="#">Fundamentals of WANs and IP Routing</a> Vol 1 Part II: Implementing Ethernet LANS CCNAv1 Chapter 4: <a href="#">Using Command-Line Interface</a>  Sybex Chapter 6: Cisco Internetworking Operating System Sybex Chapter 10: Layer 2 Switching	Lab1: <a href="#">Cisco Packet Tracer Introduction</a>
week 3 Feb7	CCNAv1 Chapter 5: <a href="#">Analyzing Ethernet LAN Switching</a> CCNAv1 Chapter 6: <a href="#">Configuring Basic Switch Management</a>  Sybex Chapter 7: Managing a Cisco Internetwork Sybex Chapter 8: Cisco IOS	Lab2: <a href="#">Physical and Logical Network Topology</a>
week 4 Feb14	CCNAv1 Chapter 7: <a href="#">Configuring and Verifying Switch Interfaces</a> Vol 1 Part III: Implementing VLANs and STP CCNAv1 Chapter 8: <a href="#">Implementing Ethernet Virtual LANs</a>  Sybex Chapter 11: Virtual LANs and Inter-Vlan Routing Sybex Chapter 15: Enhanced Switching	Lab3: <a href="#">Layer 2 Switching &amp; Trunking</a>
week 5 Feb21	CCNAv1 Chapter 9: <a href="#">Spanning Tree Protocol Concepts</a> CCNAv1 Chapter 10: <a href="#">RSTP and EtherChannel Configuration</a>	Lab4: <a href="#">Spanning-Tree Protocol Lab</a>
week 6 Feb28	Vol 1 Part IV: IPv4 Addressing CCNAv1 Chapter 11: <a href="#">IPv4 Subnetting</a> CCNAv1 Chapter 12: <a href="#">Analyzing Classful IPv4 Networks</a> CCNAv1 Chapter 13: <a href="#">Analyzing Subnet Masks</a> CCNAv1 Chapter 14: <a href="#">Analyzing Existing Subnets</a>  Sybex Chapter 4: IP Subnetting Sybex Chapter 5: VLSM, Summarization, troubleshooting TCP/IP X	Lab5: <a href="#">Wireshark Packet Capture and Decode</a>  <a href="#">Windows and Unix Network Administration</a>
week 7 Mar6	Vol 1 Part V: IPv4 Routing CCNAv1 Chapter 15: <a href="#">Operating Cisco Routers</a> CCNAv1 Chapter 16: <a href="#">Config IPv4 Address and Static Routes</a>	Lab6: <a href="#">Static Routing Lab</a>
week 8 Mar13	<b>Midterm</b>	

week 9 Mar20	<p>CCNAv1 Chapter 17: <a href="#">IP Routing in the LAN</a>  CCNAv1 Chapter 18: <a href="#">Troubleshooting IPv4 Routing</a></p> <p>Sybex Chapter 9: IP Routing</p>	Lab7: <a href="#">Inter-VLAN Routing using ROAS and SVI</a>
week10 Mar27	<p>Vol 1 Part VI: OSPF  CCNAv1 Chapter 19: <a href="#">Understading OSPF Concepts</a>  CCNAv1 Chapter 20: <a href="#">Implementing OSPF</a>  CCNAv1 Chapter 21: <a href="#">OSPF Network Types and Neighbors</a></p> <p>Sybex Chapter 18: OSPF  Sybex Chapter 19: Multi-Area OSPF<del>X</del></p>	Lab8: <a href="#">OSPF Lab</a>
week11 Apr3	<p><b>Spring Break (no class)</b></p>	
week12 Apr10	<p>Vol 1 Part VII: IP Version 6  CCNAv1 Chapter 22: <a href="#">Fundamentals of IP version 6</a>  CCNAv1 Chapter 23: <a href="#">IPv6 Addressing and Subnetting</a>  CCNAv1 Chapter 24: <a href="#">Implementing IPv6 Addressing on Routers</a>  CCNAv1 Chapter 25: <a href="#">Implementing IPv6 Routing</a></p> <p>Sybex Chapter 14 Internet Protocol Version 6 (IPv6)  Sybex Chapter 20 Troubleshooting IP, IPv6 &amp; Vlans</p>	Lab9: <a href="#">IPv6 Lab</a>
week13 Apr17	<p>Vol 1 Part VIII: Wireless LANS  CCNAv1 Chapter 26: <a href="#">Fundamentals of Wireless Networks</a>  CCNAv1 Chapter 27: <a href="#">Analyzing Cisco Wireless Networks</a>  CCNAv1 Chapter 28: <a href="#">Securing Wireless Networks</a>  CCNAv1 Chapter 29: <a href="#">Building a Wireless LAN</a></p>	Lab10: <a href="#">Cisco Packet Tracer Wireless Lab</a>
week14 Apr24	<p>Vol 2 Part 1: IP ACL  CCNAv2 Chapter 1: <a href="#">Intro to TCP/IP Transport (TCP &amp; UDP) and Applications</a>  CCNAv2 Chapter 2: <a href="#">Basic IPv4 ACLs</a>  CCNAv2 Chapter 3: <a href="#">Advanced IPv4 ACLs</a></p> <p>Sybex Chapter 12: Security and ACL</p>	Lab11: <a href="#">Access Control List Lab</a>
week15 May 1	<p>Vol 2 Part 3: IP Services  CCNAv2 Chapter 9: <a href="#">Device Management Protocols (Syslog, NTP, CDP, LLDP)</a>  CCNAv2 Chapter 10: <a href="#">Network Address Translation</a>  CCNAv2 Chapter 11: <a href="#">QOS</a>  CCNAv2 Chapter 12: <a href="#">Misc (FHRP,SNMP, FTP, TFTP)</a></p> <p>Sybex Chapter 13: Network Address Translation  Sybex Chapter 16: Device Management &amp; Security  Sybex Chapter 17: EIGRP<del>X</del></p>	Lab12: <a href="#">Network Address Translation Lab</a>

<p>week16 May 8</p>	<p>Vol 2 Part 2: Security Services (Secure device, DHCP, Port Security)  CCNAv2 Chapter 4: <a href="#">Security Architectures</a>  CCNAv2 Chapter 5: <a href="#">Securing Network Devices</a>  CCNAv2 Chapter 6: <a href="#">Switch Port Security</a>  CCNAv2 Chapter 7: <a href="#">Implementing DHCP</a>  CCNAv2 Chapter 8: <a href="#">DHCP Snooping and ARP Inspection</a></p>	
<p>Skip</p>	<p>Vol 2 Part 4: Network Architecture  CCNAv2 Chapter 13: LAN Architecture  CCNAv2 Chapter 14: WAN Architecture  (Metro Eth, MPLS, Internet VPNs)  CCNAv2 Chapter 15: Cloud Architecture</p> <p>Sybex Chapter 21: Wide Area Networking Protocols  (no BGP, PPP, PPOE, HDLC, GRE, HSRP, NetFlow)</p> <p>Vol 2 part 5: Network Automation  CCNAv2 Chapter 16: Intro to Controller-Based Networks  CCNAv2 Chapter 17: Software Defined Access  CCNAv2 Chapter 18: REST and JSON  CCNAv2 Chapter 19: Ansible, Puppet, and Chef</p> <p>Sybex Chapter 22: Intelligent Networks</p>	<p>Add vpn lab?</p> <p>Wide Area Network LabX</p> <p>Setup a web server in the Amazon AWS cloud and access remotely?</p> <p>Add network automation lab using RESTful API calls via Python?</p>
<p>week17 May15</p>	<p><b>Final Exam (Wed May 15, 2024 5:00pm ? )</b></p>	