

<b>Basic Networking Fundamentals</b> <ul style="list-style-type: none"> <li>Types of Networks</li> <li>Connections</li> <li>Protocols</li> <li>IP Addressing</li> </ul>	<b>OSI Model</b> <ul style="list-style-type: none"> <li>Communication Standards</li> </ul> <b>TCP/IP Communication</b> <ul style="list-style-type: none"> <li>TCP/IP Protocol Suite</li> <li>TCP/IP (DARPA) Model</li> <li>Transport Layer Protocols - TCP</li> <li>Three-Way Handshake</li> <li>Internet Layer Protocols</li> <li>Communication Types</li> <li>Access Methods</li> <li>CSMA/CD</li> </ul> <b>IP Addressing</b> <ul style="list-style-type: none"> <li>IP Addressing Scheme Planning</li> <li>IP Addressing Rules</li> <li>Classful IP Addressing</li> <li>Private IP Addressing</li> <li>Public IP Addressing</li> <li>NAT (Network Address Translation)</li> <li>Binary IP Addresses</li> <li>Inter-Networking</li> <li>Default Gateway</li> <li>Subnetting</li> <li>Classless Interdomain Routing (CIDR)</li> </ul>	<b>TCP/IP Command Line Tools (Windows)</b> <ul style="list-style-type: none"> <li>IPCONFIG / ARP / ROUTE</li> <li>PING / TRACERT / PATHPING</li> <li>NETSTAT / NBSTAT / NSLOOKUP</li> <li>TELNET / FTP / NETSH</li> </ul> <b>Name Resolution</b> <ul style="list-style-type: none"> <li>Host Names</li> <li>NetBIOS Names</li> <li>Name to IP Address Resolution</li> <li>Name Resolution Process</li> </ul> <b>DHCP</b> <ul style="list-style-type: none"> <li>DORA (Discover, Offer, Request, Acknowledge)</li> <li>DHCP in a Routed Network</li> </ul> <b>Routing</b> <ul style="list-style-type: none"> <li>Routing Tables</li> <li>Static Routing</li> <li>Dynamic Routing</li> <li>Routing Protocols</li> <li>Convergence</li> </ul> <b>Remote Desktop Services (RDS)</b> <ul style="list-style-type: none"> <li>RDS Role Services</li> </ul>	<b>Wireless Networking</b> <ul style="list-style-type: none"> <li>Benefits of Wireless Networking</li> <li>Wireless Access Point</li> <li>Components of Wireless Access Point</li> <li>Access Point Placement</li> <li>Wireless Networking Standards</li> <li>Wireless Network Securing</li> </ul> <b>Network Security</b> <ul style="list-style-type: none"> <li>Firewalls</li> <li>Security Devices</li> <li>Network Access Security</li> <li>User Authentication</li> <li>Device Security</li> <li>Common Security Threats</li> </ul> <b>IPv6 Fundamentals</b> <ul style="list-style-type: none"> <li>Disadvantage of IPv4</li> <li>IPv6 Solutions</li> <li>Types of IPv6 Addresses (Unicast, Multicast, Anycast)</li> <li>IPv4/IPv6 Compatibility</li> </ul>
<b>Wired Network Media</b> <ul style="list-style-type: none"> <li>Twisted Pair</li> <li>Coaxial</li> <li>Fiber Optic</li> <li>Plenum-Grade Cables</li> <li>Connectors</li> <li>Wire Standards</li> <li>Ethernet</li> <li>Standard Ethernet</li> <li>Fast Ethernet</li> <li>Gigabit Ethernet</li> </ul>			
<b>Network Topologies</b> <ul style="list-style-type: none"> <li>Physical Network Topologies</li> <li>Bus Topology</li> <li>Star Topology</li> <li>Ring Topology</li> <li>Mesh Topology</li> <li>Hybrid Topology</li> <li>WAN Technologies</li> <li>VPNs</li> <li>VLANs</li> </ul>			

