Curriculum

# Network Technician Certificate

DIGITAL WORKSHOP center

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**WHY DWC?**

**$16.4K**

average increase in salary of certificate program students

# Why Network Technician?

The Network Technician Certificate at Digital Workshop Center is a 42-hour, live, online, instructor-led program designed for career changers and entry-level IT professionals. This hands-on training prepares you for the CompTIA Network+ exam by focusing on real-world applications of networking installation, troubleshooting, and security.

What sets DWC apart is our live instruction, interactive labs, and personalized feedback throughout the course. You'll gain practical experience using industry tools like GNS3, Wireshark, pfSense, and VirtualBox. Our virtual lab infrastructure simulates real-world network environments, ensuring you're ready for on-the-job scenarios.

*(continued on next page)*

**PROGRAM LENGTH***

42 total hours.
14 total sessions of 3 hours each.

**TARGET STUDENT**

Beginner

*Additional coursework may need to be completed outside of class time.

We emphasize employer-aligned skills such as documentation and team workflows, preparing you for success in a professional network technician role. Upon completion, you'll have a strong foundation in networking and be fully prepared to take the CompTIA Network+ exam, gaining a valuable, industry-recognized credential.

**What You'll Walk Away With:**

- Hands-on experience with real-world networking tools like GNS3, Wireshark, pfSense, and VirtualBox
- Live, instructor-led labs and personalized feedback to build confidence and skill
- Practical understanding of how networks run in businesses of all sizes
- The ability to troubleshoot and solve networking problems in realistic scenarios
- Exposure to industry best practices for secure and reliable networks
- Preparation to earn the CompTIA Network+ certification, a credential recognized by employers worldwide
- Experience completing a Capstone project that showcases applied networking skills
- Professional communication, documentation, and teamwork skills essential for IT roles
- A competitive edge in the job market with skills aligned to real employer needs
- Networking knowledge you can immediately apply to support, administration, and IT operations

## PRE-REQUISITES

- **Basic Digital Literacy:** Comfortable using computers, navigating operating systems (Windows, macOS, or Linux), and performing basic tasks like file management and software installation.
- **Introductory Networking Knowledge:** Familiarity with basic networking concepts like IP addresses, routers, switches, and general network functions.
- **Basic Hardware Understanding:** Basic knowledge of computer components and networking hardware such as routers and modems.
- **Introductory Operating System Skills:** Basic experience with operating systems, including network settings and basic troubleshooting.
- A CompTIA IT Fundamentals (ITF+) or CompTIA A+ certification can be helpful but is not required.

# Possible IT Support Career Paths

Graduates of the Network Technician Certificate can pursue careers in IT support, network administration, and infrastructure management, from help desk and field technician roles to junior network administrator. The BLS projects about 48,700 openings each year for computer support specialists, including network support, through 2035.

**$76,220**

median pay for computer network support specialists (BLS, May 2025)

### NETWORK SUPPORT TECHNICIAN

Assist in installing, maintaining, and troubleshooting networks, gaining hands-on experience with real-world IT systems.

### HELP DESK / IT SUPPORT SPECIALIST

Provide first-line support for connectivity and device issues, ensuring smooth day-to-day IT operations.

### JUNIOR NETWORK ADMINISTRATOR

Support network administration tasks, including device configuration, performance monitoring, and user management.

### IT TECHNICIAN / FIELD TECHNICIAN

Install, configure, and troubleshoot network and computer systems on-site or remotely, solving real-world IT challenges.

# Performance Based Objectives

Upon successful completion of this program, students will:

- ✓ Explain networking concepts, protocols, and the OSI/TCP-IP models with industry-accurate terminology.
- ✓ Design and configure wired and wireless LANs using appropriate hardware, cabling, and topologies.
- ✓ Implement IPv4/IPv6 addressing schemes, including subnetting, DHCP configuration, and NAT.
- ✓ Set up and manage VLANs, routing protocols, and inter-VLAN communication in switched networks.
- ✓ Configure essential network services such as DNS, DHCP, and VPN for secure connectivity.
- ✓ Apply basic network security best practices, including device hardening and secure protocol use.
- ✓ Monitor network health using tools like SNMP, syslog, and packet analyzers.
- ✓ Troubleshoot connectivity and performance issues using command-line tools and a structured methodology.
- ✓ Prepare for and successfully pass the CompTIA Network+ (N10-009) certification exam.
- ✓ Demonstrate job-ready professionalism, documentation practices, and effective communication in IT support environments.

# Curriculum

All instruction is held live on Zoom, with class links in your student portal. The program meets twice per week for 3 hours per session. Your class schedule is set once enrollment fills.*

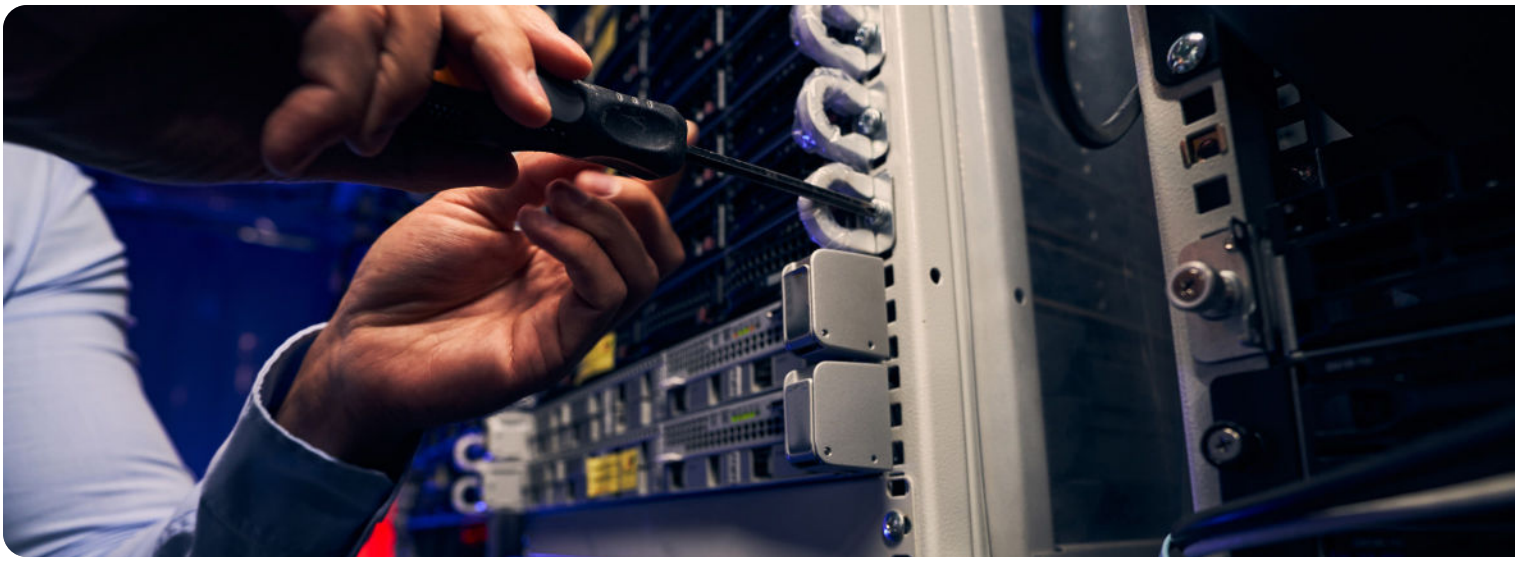
| MODULES | | HOURS* | SESSIONS |
|---|---|---|---|
| MODULE 1 | Introduction to Networking and Networking Models | 6 | 2 |
| MODULE 2 | Local Area Networks (LANs) and Cabling | 6 | 2 |
| MODULE 3 | IP Addressing, Subnetting, and Network Configuration | 6 | 2 |
| MODULE 4 | VLANs, Routing Protocols, and Network Security | 9 | 3 |
| MODULE 5 | Network Monitoring and Troubleshooting | 9 | 3 |
| MODULE 6 | CompTIA Network+ Exam Prep and Capstone | 6 | 2 |
| Total | | 42 | 14 |

*All schedules are approximate and subject to change. Your instructor reserves the right to alter this calendar as circumstances may dictate.

*Each module may require registration in multiple stand-alone classes

* Class start timing depends on enrollment and cannot be guaranteed.

CompTIA-approved study materials are purchased separately. Admissions recommends current resources.



MODULE 1 / 6 HRS / 2 SESSIONS

# Introduction to Networking and Networking Models

In this module, students will learn the core concepts of networking, including key terminology, network types (LAN, WAN, MAN), and their characteristics. The OSI and TCP/IP models will be covered in detail to explain how data flows through a network's layers. Students will also become familiar with networking devices like routers, switches, and hubs. By the end, students will be able to identify network types, understand device functions, and apply the OSI and TCP/IP models in real-world scenarios.

Session 1: Introduction to Networking Concepts

- Overview of Networking Concepts
- Types of Networks: LAN, WAN, MAN, and their Differences
- Networking Devices: Routers, Switches, Hubs, and Access Points

Session 2: Understanding OSI and TCP/IP Models

- OSI Model and Layer Functions
- TCP/IP Model and Key Protocols
- Common Networking Terminology

ALUMNI SUCCESS STORIES

LZ

*Excellent resources, generous opportunity, and high quality instruction.*

**Luis Z.**
DWC Student

READ TESTIMONIALS

MODULE 2 / 6 HRS / 2 SESSIONS

# Local Area Networks (LANs) and Cabling

This module dives deeper into configuring Local Area Networks (LANs) and explores wired and wireless network setups. Students will gain hands-on experience in working with different cabling types, connectors, and networking devices, while learning network topologies and security measures for wireless networks.

By the end of this module, students will be able to configure both wired and wireless LANs, select the appropriate cabling and connectors, and implement security protocols for wireless networks.

Session 1: Configuring Wired LANs

- Wired Networking: Cabling Types, Connectors, and Network Topologies
- Types of Connectors and Network Interfaces (RJ-45, LC, ST, etc.)
- Network Topologies: Star, Mesh, Bus, and Hybrid
- Devices: switches, routers, hubs, bridges, access points

Session 2: Configuring Wireless LANs

- Wireless Networking Technologies: Standards (802.11a/b/g/n/ac)
- Configuring and Securing a Wireless Network
- Wi-Fi Security: WPA2, WPA3, and Best Practices

MODULE 3 / 6 HRS / 2 SESSIONS

# IP Addressing, Subnetting, and Network Configuration

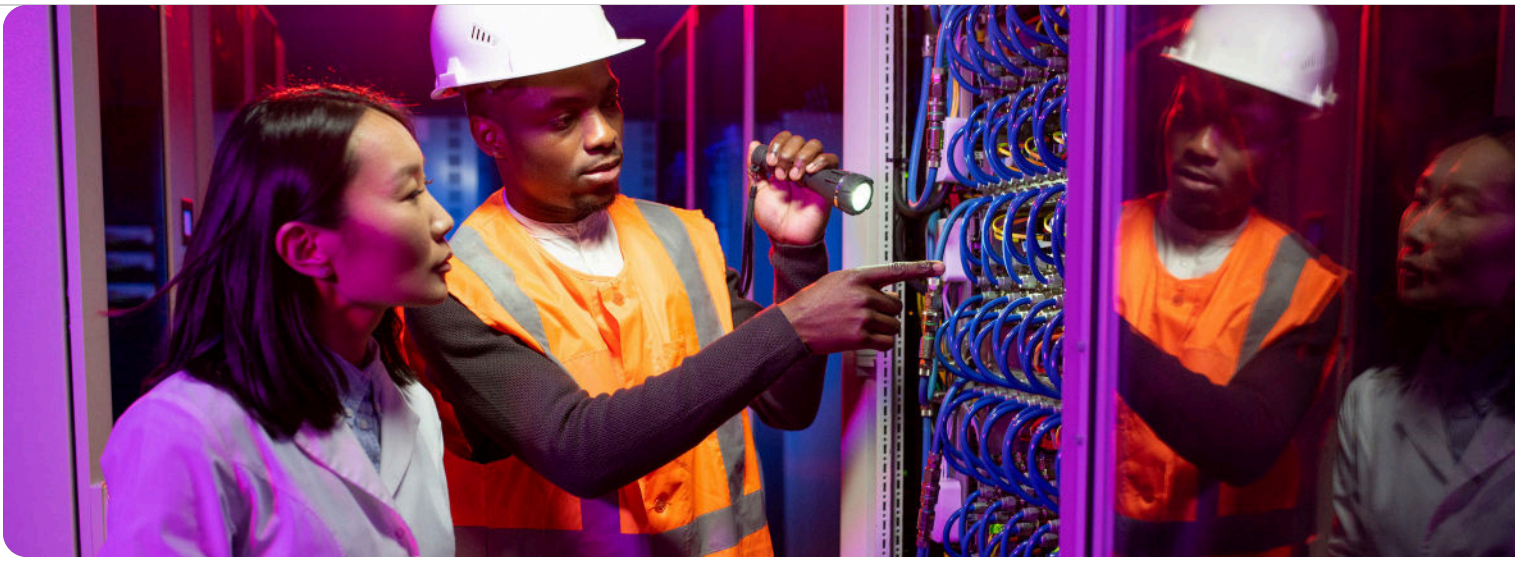
In Module 3, students will learn IP addressing, subnetting, and how to configure networks using IPv4 and IPv6. They will gain hands-on experience with subnetting to efficiently organize large networks and configure Dynamic Host Configuration Protocol (DHCP) for automatic IP address assignment. The module will also cover Network Address Translation (NAT), allowing multiple devices to share a single public IP address. By the end, students will be able to configure IPv4/IPv6 addresses, subnet networks, and implement DHCP and NAT in real-world scenarios.

Session 1: IPv4 Addressing and Subnetting

- IPv4 Addressing: Structure, Classes, and Subnetting
- Subnetting & Supernetting (CIDR) Practice and Exercises

Session 2 (3 hours): IPv6 Addressing and DHCP/NAT Configuration

- IPv6 Overview and Configuration
- Configuring DHCP for IP Address Assignment
- Network Address Translation (NAT) and Configuration



MODULE 4 / 9 HRS / 3 SESSIONS

# VLANs, Routing Protocols, and Network Security

In Module 4, students will receive an in-depth look at Virtual Local Area Networks (VLANs), routing protocols, and network security. They will learn to configure VLANs to segment traffic and improve network efficiency and security, as well as configure Inter-VLAN routing for communication between VLANs. The module will cover OSPF and EIGRP routing protocols and introduce network security practices, including securing devices, implementing Access Control Lists (ACLs), and using firewalls. By the end, students will be able to configure VLANs, implement routing protocols, and apply basic security measures to protect network infrastructure.

Session 1: Configuring VLANs and Inter-VLAN Routing

- VLAN Configuration and Management
- Routing Between VLANs

Session 2: Routing Protocols and Network Security

- Routing concepts (static vs. dynamic)
- Routing Protocols: Static Routing, OSPF, EIGRP
- Network Security Basics: Device Hardening, ACLs, and Firewalls

Session 3: Network Security Best Practices

- Secure Protocols: HTTPS, SSH, and VPNs

MODULE 5 / 9 HRS / 3 SESSIONS

# Network Monitoring and Troubleshooting

In this module, students will focus on network monitoring and troubleshooting using tools like SNMP, Syslog, and Wireshark for performance monitoring and traffic analysis. They will also learn to diagnose network issues with Ping, Traceroute, and Netstat, addressing problems like connectivity failures, latency, and packet loss. Hands-on labs will allow students to practice real-world troubleshooting. By the end, students will be proficient in using monitoring tools and troubleshooting techniques to resolve network performance issues.

Session 1: Network Monitoring Tools and Traffic Analysis

- Network Monitoring Tools: SNMP, Syslog, and Wireshark
- Common threat types (DoS, phishing, spoofing)
- Introduction to Network Performance Metrics
- Using Wireshark to Capture and Analyze Network Traffic

Session 2: Network Troubleshooting and Performance Issues

- Troubleshooting Network Connectivity: Using Ping, Traceroute, and Netstat
- Troubleshooting Performance Issues: Latency, Packet Loss, and Bandwidth

Session 3: Advanced Troubleshooting Techniques and Tools

- Advanced Network Troubleshooting with Command-Line Tools
- Secure access protocols (HTTPS, SSH, SNMPv3, RADIUS, TACACS+)
- Device hardening: passwords, updates, disable services
- Utilizing SNMP and Syslog for Troubleshooting

MODULE 6 / 6 HRS / 2 SESSIONS

# CompTIA Network+ Exam Prep and Capstone

In this final module, students will review key concepts covered throughout the program to prepare for the CompTIA Network+ certification exam. They will complete practice exam questions to test their knowledge and receive exam day preparation tips. The module will also focus on essential job-ready skills such as documentation, communication, and professionalism in IT support.

Additionally, students will complete a Capstone project to apply all they've learned in a real-world network configuration scenario. By the end of the module, students will be ready to take the CompTIA Network+ exam and demonstrate the job-ready skills required to excel in an IT support role.

Session 1: CompTIA Network+ Exam Review

- Network+ Exam Review: Key Topics and Concepts
- Practice Exam Questions and Answer Explanations

Session 2: Job-Ready Skills and Professionalism in IT

- Professionalism in IT: Documentation, Communication, and Workplace Readiness
- Effective Communication for IT Support
- Capstone Project & Final Review

# Pace & Schedule

At Digital Workshop Center, we know that how you choose to learn is one of the key factors driving your success. Combining live online learning through Zoom and individualized support, all students have access to a personalized and mentored learning experience.

Learn online. With guidance every step of the way.

DWC students have access to career coaching, Slack channels, and team support throughout the program.

Your program is a small live class with rolling enrollment: enroll any time, and your class schedule is set once enrollment fills, typically within 2 to 3 weeks.*

| | |
|---|---|
| Length | About 7 weeks |
| Time Commitment | 42 hours |
| Career Services Support | Yes |
| 1:1 With Instructors | Yes |
| Live Lectures | Yes |
| Small Live Classes | Yes |

* Start timing depends on enrollment and cannot be guaranteed.

# Why Digital Workshop Center?

DWC has delivered live, instructor-led career training nationwide since 2006. Most CompTIA Network+ prep is a self-paced video course where no one checks your lab work, or a large bootcamp where the instructor teaches to the middle.

At DWC your instructor works in networking, your class stays small, and you graduate with the DWC Network Technician Certificate, a professional certificate issued by Digital Workshop Center.

Included with tuition, for every student:

- Admissions advisors from pre-enrollment through your first day
- Instructor mentoring before, during, and after class
- A dedicated student affairs manager for setup and class files
- One-on-one career coaching on your resume and job search
- Tech support by Slack, email, or phone while you train
- Parker Dewey micro-internships and the DWC alumni community

**WE OFFER SCHOLARSHIPS**

You may only apply for one of the following scholarships:

**Tech Skills Scholarship**
For unemployed, dislocated workers, or those looking to up-skill, re-skill, or add new skills

**Women and Tech Scholarship**
For women looking to re-skill, up-skill or add new skills in a technology career

**Next Mission Scholarship**
For active or retired military service members and their families

LEARN MORE

**WHERE OUR GRADS HAVE BEEN HIRED**

# Ready to Transform Your Career in Just 3 Simple Steps?

**STEP 1**

**Talk to an Advisor**

Schedule a quick 15-minute meeting with a student advisor. Ask questions about the enrollment process, tuition, schedules & more.

SCHEDULE MEETING

**STEP 2**

**Discover the Digital Workshop Center Difference**

Experience our unique approach before you commit. Attend our mandatory program orientation to get a feel for our hands-on, practical teaching style.

LEARN MORE

**STEP 3**

**Easy Enrollment**

Begin your journey effortlessly with our straightforward online application. It's fast, easy, and your first step towards a brighter future.

APPLY NOW

# Contact Us

Phone: 970-980-8091
Email: info@digitalworkshopcenter.com

# Have Questions?

Have questions about our programs? Reach out to our admissions team for more help.

CONTACT US