

# CIW: Network Technology Foundations

Course length: 1 day

## Course Description

In this course, you will examine the fundamentals of networking technologies, including TCP/IP, wireless networking technologies, and troubleshooting techniques. You will also explore different network components and protocols that enable users to share information quickly and easily. Besides this, you will learn about different models in the network architecture and the ways to protect your data using network security.

**Course Objective:** You will explore the fundamentals of networking technology and its related features.

**Target Student:** End users or working professionals who are interested in learning the basics of network technologies and the effective ways of communication between networks.

**Prerequisites:** Students should understand fundamental computer concepts, such as how to run applications, manage files, and use a web browser on a personal computer running any operating system.

## Performance-Based Objectives

Upon successful completion of this course, students will be able to:

- Explore the fundamentals of computer networks.
- Examine network requirements and concepts.
- Examine network communication.
- Identify the components of the TCP/IP architecture.
- Identify the components of standard personal computers.
- Troubleshoot system components.
- Identify the major issues and technologies in network security.

## Course Content

### Lesson 1: Network Fundamentals

Topic 1A: Networking Terminology

Topic 1B: Network Building Blocks

Topic 1C: Standard Network Models

Topic 1D: Network Categories

### Lesson 2: Network Requirements and Concepts

Topic 2A: Network Connectivity Devices

Topic 2B: Network Media

Topic 2C: Network Topologies

Topic 2D: Network Protocols

### Lesson 3: Network Communication

Topic 3A: Transmission Methods

Topic 3B: Transmission Technologies

Topic 3C: Wireless Technologies and Standards

### Lesson 4: TCP/IP Architecture

Topic 4A: The TCP/IP Suite



Topic 4B: The TCP/IP Model  
Topic 4C: Internet Protocol Addressing  
Topic 4D: Routing in TCP/IP Networks  
Topic 4E: TCP/IP Troubleshooting Utilities

### **Lesson 5: System Hardware**

Topic 5A: System Unit Components  
Topic 5B: System Connection Methods  
Topic 5C: Windows File System Management

### **Lesson 6: Troubleshooting System Components**

Topic 6A: Troubleshoot Storage Devices  
Topic 6B: Troubleshoot Power Supplies  
Topic 6C: Troubleshoot Memory Issues  
Topic 6D: Troubleshoot CPUs and System Boards

### **Lesson 7: Network Security**

Topic 7A: Network Threats  
Topic 7B: Data Protection Methods  
Topic 7C: Local Security  
Topic 7D: Internet Security

**Appendix A:** CIW v5 Foundations Exam

