

Cisco IT Essentials v4.1

Course Overview

Total Hours: 240

Fundamental Chapters 1 - 10

Chapter 1: Introduction to the Personal Computer

Hours: 14.00

Goal: The chapter will review IT certifications and the components of a basic personal computer system.

Objectives:

- Explain IT industry certifications
- Describe a computer system
- Identify the names, purposes, and characteristics of cases and power supplies
- Identify the names, purposes, and characteristics of internal components
- Identify the names, purposes, and characteristics of ports and cables
- Identify the names, purposes, and characteristics of input devices
- Identify the names, purposes, and characteristics of output devices
- Explain system resources and their purpose

Chapter 2: Safe Lab Procedures and Tool Use

Hours: 5.00

Goal: This chapter covers basic safety practices for the workplace, hardware and software tools, and the disposal of hazardous materials.

Objectives:

- 2.1 Explain the purpose of safe working conditions and procedures
- 2.2 Identify tools and software used with personal computer components and their purpose
- 2.3 Implement proper tool use

Chapter 3: Computer Assembly – Step by Step

Hours: 15.00

Goal: This chapter focuses on computer assembly step by step in a logical, methodical manner when working with computer components. As with any learned trade, computer assembly skills will improve dramatically with practice.

Objectives:

- 3.1 Open the case
- 3.2 Install the power supply
- 3.3 Attach the components to the motherboard and install the motherboard
- 3.4 Install internal drives

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- 3.5 Install drives in external bays
- 3.6 Install adapter cards
- 3.7 Connect all internal cables
- 3.8 Re-attach the side panels and connect external cables to the computer
- 3.9 Boot the computer for the first time

Chapter 4: Basics of Preventive Maintenance and Troubleshooting

Hours: 4.00

Goal: This chapter introduces preventive maintenance and the troubleshooting process.

Objectives:

- 4.1 Explain the purpose of preventive maintenance
- 4.2 Identify the steps of the troubleshooting process

Chapter 5: Fundamental Operating Systems

Hours: 15.00

Goal: In this chapter, students will learn about the components, functions, and terminology related to the Windows 2000, Windows XP, Windows Vista, and Windows 7 operating systems.

Objectives:

- 5.1 Explain the purpose of an operating system
- 5.2 Describe and compare operating systems to include purpose, limitations, and compatibilities
- 5.3 Determine operating system based on customer needs
- 5.4 Install an operating system
- 5.5 Navigate a GUI
- 5.6 Identify and apply common preventive maintenance techniques for operating systems
- 5.7 Troubleshoot Operating Systems

Chapter 6: Fundamental Laptops and Portable Devices.

Hours: 9.00

Goal:

Objectives: This chapter focuses on the differences between laptops and desktops and describes the features of PDAs and smartphones.

- 6.1 Describe laptops and other portable devices
- 6.2 Identify and describe the components of a laptop
- 6.3 Compare and contrast desktop and laptop components
- 6.4 Explain how to configure laptops
- 6.5 Compare the different mobile phone standards
- 6.6 Identify common preventive maintenance techniques for laptops and portable devices

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- 6.7 Describe how to troubleshoot laptops and portable devices

Chapter 7: Fundamental Printers and Scanners

Hours: 12.00

Goal: This chapter provides essential information about printers and scanners. Students will learn how printers operate, what to consider when purchasing a printer, and how to connect printers to an individual computer or to a network.

Objectives:

- 7.1 Describe the types of printers currently available
- 7.2 Describe the installation and configuration process for printers
- 7.3 Describe the types of scanners currently available
- 7.4 Describe the installation and configuration process for scanners
- 7.5 Identify and apply common preventive maintenance techniques for printers and scanners
- 7.6 Troubleshoot printers and scanners

Chapter 8: Fundamental Networks

Hours: 18.00

Goal: This chapter provides an overview of network principles, standards, and purposes.

Objectives:

- 8.1 Explain the principles of networking
- 8.2 Describe types of networks
- 8.3 Describe basic networking concepts and technologies
- 8.4 Describe physical components of a network
- 8.5 Describe LAN topologies and architectures
- 8.6 Identify standards organizations
- 8.7 Identify Ethernet standards
- 8.8 Explain OSI and TCP/IP data models
- 8.9 Describe configuring a NIC and a modem
- 8.10 Identify names, purposes, and characteristics of other technologies for establishing connectivity
- 8.11 Identify and apply common preventive maintenance techniques for networks
- 8.12 Troubleshoot the network

Chapter 9: Fundamental Security

Hours: 9.00

Goal: This chapter focuses on computer and network security.

Objectives:

- 9.1 Explain why security is important

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- 9.2 Describe security threats
- 9.3 Identify security procedures
- 9.4 Identify common preventive maintenance techniques for security
- 9.5 Troubleshoot security

Chapter 10: Communication Skills

Hours: 8.00

Goal: In this chapter, students will learn the relationship between communications skills and troubleshooting when dealing with customers.

Objectives:

- 10.1 Explain the relationship between communication and troubleshooting
- 10.2 Describe good communication skills and professional behavior
- 10.3 Explain ethics and legal aspects of working with computer technology
- 10.4 Describe call-center environment and technician responsibilities

Advanced Chapters 11 - 16

Chapter 11: Advanced Personal Computers

Hours: 14.00

Goal: IT

Objectives:

- 11.1 Give an overview of field, remote, and bench technician jobs
- 11.2 Explain safe lab procedures and tool use
- 11.3 Describe situations requiring replacement of computer components
- 11.4 Upgrade and configure personal computer components and peripherals
- 11.5 Identify and apply common preventive maintenance techniques for personal computer components
- 11.6 Troubleshoot computer components and peripherals

Chapter 12: Advanced Operating Systems

Hours: 18.00

Goal: IT

Objectives:

- 12.1 Select the appropriate operating system based on customer needs
- 12.2 Install, configure, and optimize an operating system
- 12.3 Describe how to upgrade operating systems
- 12.4 Describe preventive maintenance procedures for operating systems
- 12.5 Troubleshoot operating systems

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Chapter 13: Advanced Laptops and Portable Devices

Hours: 6.00

Goal: IT

Objectives:

- 13.1 Describe wireless communication methods for laptops and portable devices
- 13.2 Describe repairs for laptops and portable devices
- 13.3 Select laptop components
- 13.4 Describe preventive maintenance procedures for laptops
- 13.5 Describe how to troubleshoot a laptop

Chapter 14: Advanced Printers and Scanners

Hours: 12.00

Goal: IT

Objectives:

- 14.1 Describe potential safety hazards and safety procedures associated with printers and scanners
- 14.2 Install and configure a local printer and scanner
- 14.3 Describe how to share a printer and a scanner on a network
- 14.4 Upgrade and configure printers and scanners
- 14.5 Describe printer and scanner preventive maintenance techniques
- 14.6 Troubleshoot printers and scanners
- 14.7 Perform Printers and Scanners Work Order Labs

Chapter 15: Advanced Networks

Hours: 18.00

Goal: IT

Objectives:

- 15.1 Identify potential safety hazards and implement proper safety procedures related to networks
- 15.2 Design a network based on the customer's needs
- 15.3 Determine the components for your customer's network
- 15.4 Implement the customer's network
- 15.5 Upgrade the customer's network
- 15.6 Describe installation, configuration and management of a simple mail server
- 15.7 Describe preventive maintenance procedures for networks
- 15.8 Troubleshoot the network

Chapter 16: Advanced Security

Hours: 10.00

Goal: IT

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Objectives:

- 16.1 Outline security requirements based on customer needs
- 16.2 Select security components based on customer needs
- 16.3 Implement customer's security policy
- 16.4 Perform preventive maintenance on security
- 16.5 Troubleshoot security
- 16.6 Perform security work order lab

Review:

Hours: 53.00

- Final Exam
- Skills Based Final Exam
- A+ Certification Preparation