



A+ CERTIFICATION

A+ Certification is designed to give the students a solid foundation & working knowledge in two key areas: computer hardware (including peripherals & subsystems) & disk operating systems (MS-DOS, Windows 95/98 & Windows 2000 Professional) as set forth and required by CompTIA (Computing Technology Industry Association). Students will learn in theory & implementation the fundamentals necessary to pass the Core Hardware Service Technician exam and the Operating System Technologies exam. Students will also be introduced to the fundamentals of local area networking and internetworking concepts & technologies.

A+ COURSE OUTLINE

48 Hours

Lesson 1

Introduction to Microcomputers
A Brief History of Computers
Number Systems
Microcomputer System Components and Their Functions
Software and Firmware
Tools of the Trade

Lesson 2

Safety
Basics of Electricity and Electronics
General Safety Guidelines
Fire Safety
Computer Equipment Disposal

Lesson 3

System Components
Power Supplies
ROM BIOS
Central Processing Units
System Boards
Memory

Lesson 4

Bus Architectures
What is a Bus?
The 8-bit bus
The ISA Bus
The EISA Bus
Micro Channel Architecture Bus
The PCI Bus
Plug and Play
Video Circuitry Buses

Lesson 5

Ports, Connectors, and Cables
Overview of Input/Output Ports
PS/2 Ports
Serial Ports
Parallel Ports
Universal Serial Bus Ports
FireWire Ports

Lesson 6

Expansion Boards
Drive Controllers
Video Cards
Sound Cards
Modem Cards

Lesson 7

Storage Systems
Fixed Disk Drives
Removable Media Disk Drives
Backup Systems



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Lesson 8

Peripheral Devices
Primary Input Devices
Primary Output Devices
Other Input/Output Devices

Lesson 9

Portable Computing
Components of Portable Systems
PC Cards
Power Management

Lesson 10

Networking
Network Concepts
Introduction to the OSI Model
Network Connectivity

Lesson 11

Overview of the MS-DOS Operating System
Introduction to MS-DOS
Installing and Networking MS-DOS
Using and Configuring MS-DOS
Troubleshooting MS-DOS

Lesson 12

Introduction to the Windows 9x Family of Products
Introduction to Windows 9x
Installing Windows 9x
Troubleshooting the Setup Process
Configuring the Windows 9x User Environment

Lesson 13

Introduction to Windows 9x Networking
Networking Overview
Installing Network Components
Using Windows 9x in a Peer-to-Peer Environment
Using Windows 9x in a Domain Environment

Lesson 14

Windows 9x Architecture
The Structure of the Windows 9x Operating System
The Windows 9x Registry Memory
The Virtual Machine Manager
Plug and Play

Lesson 15

Supporting Printers
Printing in Windows 9x
Network Printing

Lesson 16

Troubleshooting Windows 9x
Troubleshooting Strategy
Troubleshooting Configuration Problems



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Lesson 17

Introduction to the Windows 2000 Family of Products
Overview of Windows 2000
Installing Windows 2000
Server-based Installation

Lesson 18

The Windows 2000 Boot Process
Examining the Windows 2000 Boot Process
Troubleshooting the Boot Process

Lesson 19

Windows 2000 System Administration Basics
System Administration in Windows 2000
The Windows 2000 Registry

Lesson 20

Introduction to Networking with TCP/IP
The Microsoft TCP/IP Protocol Suite
IP Addresses and Address Classes
Network and Host Addresses
Troubleshooting TCP/IP Addressing

Lesson 21

Name Resolution Services
Host Name Resolution Methods
NetBIOS Name Resolution Methods

Lesson 22

Customizing a Windows 2000 Installation
Installing New Hardware
Customizing Windows 2000
Adding and Removing Software and Operating System Updates

Lesson 23

Managing Network Printing
An Overview of Windows 2000 Printing
Administering Printers
Web-based Printing in Windows 2000

Lesson 24

Managing Hard Disks and Partitions
Creating and Managing Partitions on Basic Disks
Dynamic Disks
Disk Defragmentation and Compression
Managing Encryption

Lesson 25

Monitoring and Troubleshooting Windows 2000
Working with Event Viewer
Monitoring Performance
Optimizing Windows 2000 Performance
Protecting Against Disaster