

A+ Certification 2006

12 Sessions –

36 Hours of Interactive On Line Training

CompTIA A+® Certification has been established as the standard credential for anyone beginning an information technology career. In this CompTIA A+ certification course from ExamForce, you'll delve into the inner workings of the personal computer with Mike Meyers; the IT industry's leading CompTIA A+® authority. Meyers shows you how hardware components and operating systems work together for optimum functionality. This is the course to give you the knowledge and confidence to work in the real world of computers and help prepare you to pass the CompTIA A+® certification exam. CompTIA A+® 2006 Certification
[Mike Meyers](#)

Benefits • Launch your career, become a certified IT professional.

- You are in control - you decide where and when you want to learn!
- Our courses meet or exceed all CompTIA® certification objectives

Session 1

- Section A: Certification Standards
 - A+ Test Versions
 - Testing Locations and Information
- Section B: Visible PC
 - Computer Hardware
 - System Unit Overview
 - Connectors
 - Sound Connectors
 - New System Unit Connectors
- Section C: System Unit
 - Inside the System Unit
 - Motherboard Components
 - Electrostatic Discharge
 - Power Supply and Cables
- Section D: CPU Overview
 - Data Bus
 - Counting in Binary
 - Clock Speed
 - Program Commands
 - RAM
 - Address Bus
 - Line of Code
- Section E: CPUs
 - Intel 8086
 - Internal CPU Speed
 - RAM Cache
 - Double Cache
 - CPU Types
 - Historical CPUs
 - Pipelining
 - Four-Step Process
 - Dual Pipelines
- Section F: Modern CPUs
 - Chip Sets
 - Frontside/Backside Bus
 - Pentium
 - PGA CPU
 - LGA CPU

Session 2

- Section A: Next Generation CPUs
 - Pentium 4
 - The Process
 - Pentium Speed
 - Hyper-Threading
 - Two CPUs
 - 32-Bit Processors
- Section B: Processor Types
 - 64-Bit Processor
 - AMD 64-Bit Processor
 - AMD Solution
 - Core Processors
 - Low-End Processors
 - Mobile Processors
- Section C: Installing and Upgrading CPUs
 - Installing a CPU
 - Fan Installation and Connectors
 - Over-Clocking
 - Liquid Cooling
 - Reservoir, Pump, and Radiator
- Section D: RAM Concepts
 - RAM Transistors and Capacitors
 - DRAM Organization
 - DRAM
 - Memory Chips (x8, x16, x32) Width
- Section E: RAM Types
 - FPM/EDO
 - SDRAM
 - RDRAM
 - DDR SDRAM
 - Measuring DDR and DDR2 Speed
 - Dual-Channel
 - ECC RAM/Double-Sided DRAM
- Section F: Installing and Repairing RAM
 - Adding RAM
 - RAM Count
 - CPU-Z

Session 3

- Section A: CMOS
 - BIOS Chip
 - CMOS Set Up
 - Basic CMOS
 - Advanced CMOS
 - Security
 - Boot and Exit Options
 - Clearing CMOS
- Section B: Power-On Self Test (POST)
 - Beep Codes
 - Text Error Code
 - POST Card
- Section C: Expansion Bus
 - Expansion Slots
 - PC Bus
 - ISA Bus
 - False Starts
 - PCI
 - AGP
 - Parallel vs. Serial
 - PCI Express
- Section D: System Devices
 - System Resources
 - I/O Addresses
 - Device Manager
 - Hexadecimal
 - Hex to Binary
- Section E: Interruption
 - IRQ Wire
 - PCI/ISA Interrupt Channels
 - IOAPIC
 - Interrupt Request
 - DMA
- Section F: Installing Devices
 - Network Card Installation
 - Device Errors
 - COM Ports and LPT Ports
- Section G: Motherboard

- Speculative Execution
 - MMX
 - VRM
 - AMD-K5/Pentium Pro
- Section G: Processors
- Pentium III
 - Code Names
 - AMD Athlon Thunderbird

· RAM Errors

- AT/ATX
 - BTX
 - NLX
 - ITX
 - Motherboard Installation
 - Wire Placement
 - AMR/CNR
- Section H: Power Supply
- AC/DC Transformer
 - Surge Suppressor
 - AT and ATX Power Supplies
 - Connectors
 - ATX Power Versions
 - Latest Generation Power Supplies

Session 4

Section A: System Build

- Assembly
- Case Components
- Mounting the Motherboard
- Fan Mounting
- Power Supply Installation

Section B: Hard Drive Technology

- Read-Write Armature
- Flux Reversal
- CHS Values
- Drive Types
- Terminology
- Hard Drive Controllers

Section C: ATA Hard Drives

- ATA-1 Standard
- ATA-2 (EIDE) Standard
- ATA-4 Standard
- ATA-5 Standard
- Cables
- Controller Issues
- Interrupt 13 Extensions
- ATA-6 Standard
- Serial ATA

Section D: SCSI

- Concepts
- Host Adapter
- SCSI Chains
- Termination
- LUN
- SCSI Types
- Termination Types
- SCSI Cable Lengths

Section E: PATA Hard Drive Installation

- Drive Components
- SetUp Utility
- Boot Order
- Set Boot Order
- Configure Drive

Section F: CD Media

- Compact Disc
- CD-ROM
- Speed Ratings
- CD-R
- CD-RW
- 80 Millimeter CDs
- DVD-ROM Types
- High Definition
- DVD Media

Session 5

Section A: Removable Media

- Floppy Drives
- Thumb Drives
- External Hard Drives
- USB Connectors
- FireWire
- eSATA
- Flash Drives

Section B: Sound

- Sound Cards
- Sound Card Setup
- Speakers
- Sound Card Installation
- Sound Devices
- Codecs

Section C: CRT and LCD Monitors

- Video Cards
- Video RAM
- CTR Monitors
- LCD Monitors
- CCFLs
- Response Rate
- Brightness/Contrast

Section D: Video Technology

- VGA Connection
- DVI
- Video Resolution
- Color Depth
- Dual-Link DVI
- Projectors
- Monitor Size and Resolution
- Video Cards

Section E: Video Card Installation

- Beginning Installation
- Uninstall Video Card
- Video Card Tools
- Display Property Settings
- Advanced Options
- Power Option Properties
- Troubleshooting Installation Issues

Session 6

Section A: Modern Operating Systems

- Types and Function
- User Interfaces
- Partitioning and Formatting
- Network Support
- Domains, Workgroups, and Applications

Section B: Operating Systems

- File Allocation Table
- Windows History
- System Versions
- Linux/UNIX/Uuntu
- Macintosh OSX

Section C: Installing and Upgrading

- Installation Checklist
- Clean Install
- Partitions, Service Packs, Updates

Section D: Installing Windows

- CMOS Setup
- Partition and Format Setup
- Product Codes
- Windows XP Setup
- Settings and Users

Section E: Finalizing Installation

- Installing Drivers and Devices
- Installing DirectX Video Cards
- Activation, Updates, Options Software

Section F: Windows Setup Tools

- Properties and Interface
- NT Loader/NT Detect
- Boot.ini and SWAPFILE
- Adjusting Virtual Memory
- File Extensions and Attributes
- Registry Editor

Section G: Installing Drives

- Master Boot Record
- Partitions and Dynamic Drives
- Drive Partitioning
- Creating Extended Partitions
- Converting to a Dynamic Drive

Section H: RAID

- RAID 0
- RAID 1
- Parity
- RAID 5

- RAID 0+1
- Hardware RAID
- Enabling RAID
- RAID Set
- Software RAID

Session 7

Section A: I/O Devices and Settings

- Keyboards and Mice
- Control Panel
- Web Camera
- Microphone
- Sound and Audio Device Properties
- Specialty Devices
- Cleaning Components
- Keyboard and Mice Cleaning

Section B: Command Prompt

- Introduction
- Documents and Settings
- File Volumes
- Specialty Commands
- Attributes

Section C: Working with Command Prompt

- Directories
- Wildcards
- Deleting Files
- Copy Command
- Xcopy
- Move Command

Section D: Basic Windows Maintenance

- File Fragmentation
- Error Checking
- CHKDSK
- Disk Cleanup
- Disk Cleanup Options

Section E: Backup

- System Restore
- System Restore
- ASR/ERD
- Bootable Drives
- Live CDs
- Event Viewer

Section F: Troubleshooting Windows

- Startup Problems
- Recovery Console Commands
- Recover Registry Commands
- Recovery CDs/Partitions
- Windows Advanced Options Menu
- AutoStart Programs

Section G: Windows Errors

- Task Manager/Processes
- System File Checker
- Services
- Remote Desktop
- Windows Reporting Tool

Session 8

Section A: Networking

- Network Cables
- Cat Levels
- Fiber-Optic Cable
- Fire Ratings
- Network Connectors

Section B: Hardware Technology

- Network Connections
- MAC Address Details
- Packets
- Ethernet Standard
- CSMA/CD
- 10Base-T
- 100Base-T
- 1000Base-T
- Network Card Settings
- Network Hub

Section C: Wireless

- Wireless Options
- Wireless Access Points
- Connecting to a Wireless Network
- Cellular Wireless
- Bluetooth Introduction
- Working with Bluetooth

Section D: Network Protocols

- Protocol Stacks
- IPX/SPX

Section E: TCP/IP Protocol

- TCP/IP Properties
- DNS
- DNS Resolution
- DHCP
- APIPA

Session 9

Section A: Network Sharing

- Workgroups/Domains
- Rights and Permissions
- Groups
- Setting Up User Accounts
- File Sharing
- Making Workgroups and Sharing
- Accessing Shared Folders
- Sharing a Network Printer

Section B: The Internet

- Connections
- ISDN
- Cable Modem
- DSL
- Satellite
- Broadband Box
- Routing
- Router Diagram
- Firewall Configuration

Section C: Internet Services

- Ports
- TCPView
- TCP, UDP, and ICMP Packets
- Internet Options

Section D: Network

- Troubleshooting
- Structured Cabling
- Cable Testers
- Link Lights
- Configuration Commands
- Ipconfig
- Shared Resources

Session 10

Section A: Laptops vs. Desktops

- Internal Components

Session 11

Section A: Security

- Passwords

Session 12

Section A: Importance of Communication

- Skills

- Hard Drive
- External Monitor
- Function Keys
- Power Settings
- Monitor
- Port Replicator
- PCMCIA
- Power and Batteries

Section B: Troubleshooting Laptops

- AC Adaptor
- Power Checklist
- Multimeter
- Testing Process
- Connecting to a Laptop
- Infrared Port
- Devices
- LCD
- Diagnosis Checklist
- Input Devices

Section C: Printers

- Dot Matrix
- Inkjet
- Laser
- Toner
- Laser Printer Diagram
- Other Printer Types

Section D: Installing Printers

- Printer Installation
- Installing Print Drivers

Section E: Printer Settings and Maintenance

- Print Options
- Printer Features
- Toner Cartridges
- Scheduled Maintenance
- Print Problems

Section F: Scanners

- Overview
- TWAIN
- Scanner Maintenance

- Security Devices

Section B: Protecting Your PC

- Security Review
- Virus Definition
- More Definitions
- Software Firewall
- avast!
- Locking and Encryption
- SSL
- Policies

Section C: Protecting Your Network

- Wireless Security
- Encryption
- NAT
- DHCP Server
- Social Engineering
- This Old PC

Section D: Troubleshooting Methods

- FRU
- System Diagnosis
- Mental Reassemble
- Validate Results

Section E: Safety

- Safe Working Environment
- Dangerous Components
- Accidents
- Disposables

Section F: Communication and Professionalism

- Use Clear, Concise, Direct Statements
- Avoid Interrupting
- Clarify Statements, Ask Questions
- Avoid Jargon, Abbreviations, Acronyms
- Listen to Customers
- Maintaining Positive Attitude and Voice
- Avoid Arguing/Being Defensive
- Do Not Minimize Customer Problems
- Avoid Being Judgmental
- Avoid Distractions/ Interruptions
- Respectful of Property

- Being a Powerful Communicator
- Improved Quality, Reduced Costs

Section B: Communications Theory

- Communication Formulas
- Communication Process
- Three Perceived Elements
- Tone of Voice
- Body Language
- Environment
- Communication Roles

Section C: Listening Skills

- Hindrances of Listening
- Effective Listening
- Seven Distractions
- Five Listening Levels

Section D: Effective Listening Techniques

- Empathy Listening
- Seek Synergy
- Five Steps of Listening
- Asking Questions
- Customer Service Principles

Section E: Translating Your Knowledge

- Comparison Method
- Contrast Method
- Construction Method
- Combination Method
- Things to Remember

Section F: Building Rapport

- Three Rapport Elements
- Use Their Names
- Discover Their Interests
- Let Them Talk
- Pacing
- Match Conversational Mod