



Contacts Page

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Computer Technology Professional Diploma

This program is for any students interested in pursuing a career in the IT (Computer) Industry.

Specific Jobs for Graduates after Program:

- *PC Bench Tech*
- *Set Up Tech*
- *Network Admin*
- *Software Testing*

Admission Requirements for Program:

- *Grade 12 Diploma or*
- *GED or*
- *Mature Students Status (Must pass Valpar Test)*

Instruction:

- *Program is 198 hours of Instruction Time*
- *After students are completed program they will be required to write three exams at a Prometric Testing Center.*

Tuition:

- *\$6,750.00 this price includes books, tools, lab equipment and exams.*



Computer and Technology Professional Diploma Outline

CompTIA A+ (220-701 Essentials)

- 1. Troubleshooting Methodology**
 - A. Troubleshooting models and problem tracking systems
 - B. Professionalism and Customer Satisfaction
- 2. Operating Systems**
 - A. Operating system fundamentals
 - B. Directory and file management
 - C. File and folder access control
- 3. Electricity and Power Supplies**
 - A. Electrostatic discharge and ESD safe practices
 - B. Purpose and features of PC power supplies
- 4. CPUs and Motherboards**
 - A. Function, features, identification, and classification of CPU's
 - B. Packaging, slots, and cooling techniques
 - C. Motherboards and system cases
- 5. Basic Input/Output System**
 - A. BIOS setup utility, hardware configuration, and BIOS updates
 - B. The POST and boot processes
- 6. Memory Systems**
 - A. Memory
 - B. Memory packaging
 - C. Monitor memory usage
- 7. Bus Structures**
 - A. Primary types of buses (interrupt, (IRQ, I/O, DMA, and base memory address)
 - B. The PCI bus
 - C. Video buses
- 8. Expansion Cards**
 - A. Common Drive interfaces
 - B. Video adapters and standards
 - C. Sound cards
 - D. Internal modems
- 9. Peripheral Connection Types**
 - A. Serial and parallel ports, cables, and connectors
 - B. Keyboards, mice, and pointing devices
 - C. USB ports, cables, and connectors
 - D. FireWire ports, cables, and connectors
 - E. Multimedia ports, cables, and connectors
- 10. Data Storage Devices**
 - A. Hard drives, partitions, and file systems
 - B. Optical drives
 - C. Removable drives
 - D. Maintain your hard disks
- 11. Video Output and Image Input Devices**
 - A. How CRT and LCD's produce images
 - B. Install and configure image input devices



12. Printers

- A. Printing technologies
- B. Install, configure and manage printers

13. Connecting Computers

- A. Basic components of a network
- B. Compare wired network connections
- C. Differentiate between basic internetworking devices

14. Networking Computers

- A. Various types of addresses to identify devices on a network
- B. Create client network connections (wired, wireless, and dial up methods)

15. Portable Computers

- A. Identify and install notebook components
- B. Troubleshoot and maintain notebook components

16. Monitoring and Management

- A. Monitor the operating system
- B. Monitor system performance
- C. Manage the operating system

17. Operating System Troubleshooting

- A. Stages of Windows startup process
- B. Identify operating system problems

18. Security

- A. Configure basic user authorization
- B. Windows file encryption
- C. Biometric and other security
- D. Manage human aspects of computer security

19. Windows Installation and Upgrades

- A. Installation
- B. Upgrades

20. Safety and Maintenance

- A. Safety issues and hazards
- B. Preventative maintenance
- C. Ways to avoid injury and strain
- D. Proper methods for disposing equipment

21. Troubleshooting Hardware

- A. Back up
- B. Common hardware-related symptoms and causes



CompTIA A+ (220-702 Practical Application)

1. Power Systems

- A. Install a new power supply
- B. Troubleshoot power supplies

2. CPUs and Motherboards

- A. Configure the BIOS and CPU and motherboard installation
- B. Motherboard and CPU troubleshooting

3. Memory Systems

- A. RAM installation
- B. Memory troubleshooting

4. Expansion Cards

- A. Identify system resources
- B. Expansion card installation
- C. Expansion card troubleshooting
- D. Port, cable and connector troubleshooting

5. Data Storage Devices

- A. Hard drives
- B. Optical drives
- C. USB and floppy drives
- D. Storage device troubleshooting

6. Printers and Scanners

- A. Routine Maintenance
- B. Troubleshooting

7. Mobile Computing

- A. Configure your mobile computer
- B. Replace components

8. Windows Management

- A. Manage directories and files
- B. Manage the operating system
- C. Remote assistance using Remote Desktop

9. Windows Maintenance

- A. Monitor the operating system
- B. Perform operating system maintenance tasks
- C. Task scheduler
- D. Troubleshooting operating system problems

10. SOHO Networking

- A. Networking components
- B. Install and configure a SOHO network

11. Network Troubleshooting

- A. Prepare tool kits
- B. Client-side connectivity issues

12. Security

- A. Common security threats
- B. Implement and troubleshoot security measures.



CompTIA Network+ (2009 Edition)

1. **Network Basics**
 - A. Basic components
 - B. Characteristics of network technologies
 - C. OSI model
2. **Wired Computer-to-Computer Connections**
 - A. Wired network cables and connectors
 - B. Install and configure network interface and modem PCI cards
3. **Network-to-Network Connections**
 - A. Network –to-network connection components
 - B. Install LAN wiring
 - C. LAN wiring tests and equipment
4. **Wired Internetworking Devices**
 - A. Basic internetworking devices
 - B. Specialized internetworking devices
5. **Wired Communication Standards**
 - A. TCP/IP protocol suite
 - B. Configure TCP/IP
 - C. DHCP and DHCPv6
6. **Wireless Networking**
 - A. Needed hardware components
 - B. Various communication standards
 - C. Install and configure a wireless network connection
7. **Security Threats and Mitigation**
 - A. Common security threats
 - B. Ways to mitigate security threats
8. **Security Practices**
 - A. Secure an operating system
 - B. Secure network devices
9. **Network Access Control**
 - A. Network authentication methods
 - B. Basic concepts behind public key infrastructure
 - C. Methods of remote access security
 - D. Methods to secure a wireless network
10. **Monitoring**
 - A. Monitor the network
 - B. Event Logs
11. **Troubleshooting**
 - A. Basic troubleshooting techniques and preparing a tool kit
 - B. Troubleshoot the physical and logical network
 - C. Implement a network troubleshooting methodology based on a given scenario



Printer Repair and Diagnostics

1. **General Troubleshooting**
 - A. Safty and Environment
 - B. Intro to Printers and Printing – DOS to Windows
 - C. Drivers and output presentation
 - D. Interface identification
 - E. Printer Communication, cable protocols and cabling
2. **Dot Matrix Printers**
 - A. How they Work
 - B. Common Problems
 - C. Troubleshooting Steps
 - D. Component identification – dismantle, reassemble and test
3. **Ink Jet Printers**
 - A. How They Work and the technologies
 - B. Common Problems
 - C. Troubleshooting Steps
 - D. Component identification – dismantle, reassemble and test
4. **Laser Printers**
 - A. How They Work – Print engine process
 - B. Monochrome and Colour theory
 - C. Scanning/Photocopy process
 - D. Common Problems
 - E. Troubleshooting Steps – Identify, Isolate and conquer
 - F. Component identification – dismantle, reassemble and test

Windows 2003 Advanced Server

1. **Windows NT Services**
 - A. DHCP
 - B. WINS
 - C. DNS
2. **Workgroups**
 - A. Peer to Peer Networks
 - B. Resources
 - C. UNC
3. **Domains**
 - A. NT 4 Domains
 - B. SID and SAM
 - C. Trust Relationships
4. **Domain Name Systems**
 - A. DNS servers
 - B. Resolving Names
 - C. Resolving IP Addresses
 - D. Types of DNS servers
 - E. DNS Records
5. **Active Directory**
 - A. What is Active Directory
 - B. Name Space
 - C. Features
 - D. Does Active Directory Relate to Domains
6. **Administering Active Directory**
 - A. Group Types/Scopes
 - B. Strategies for using Groups
 - C. Active Directory Manager
 - D. Group Policies
 - E. Permissions
7. **Security and Permissions**
 - A. NTFS File Security
 - B. NTFS Folder/Directory Permissions
 - C. DFS
 - D. Local Permissions & Shared Permissions
 - E. File Ownership
 - F. User Home Directories
 - G. Scripts
 - H. Disk Quotas
 - I. Folder Redirection



Employment Skills Training (Community Employment Services)

1. Myers-Briggs®, Personality Dimensions®

- Complete three self assessments to determine the color spectrum
- Participate in a group process to validate individual color spectrum
- Determine how the color spectrum relates to career choices
- Learn to value the gifts and talents of others

2. Bad Apples - Communications

- To recognize and describe the characteristics of a bad attitude
- To understand how negativity impacts relationships and performance
- Explore a 5 step process for dealing with difficult people
- To manage conflict with confidence, resulting in a positive outcome for everyone

3. Time Management

- Examine the concept of “time” and explore how to effectively control time instead of letting it control our lives
- Identify “time wasters” in our lives
- Develop strategies to turn our “time wasters” into “time savers”

4. Customer Service

- The Customer
- The Service Provider
- The Interactive Skills
- Putting It All Together – Developing a Quality of Service Credo

The Customer

- Participants will experience the role of the customer by “walking in the shoes of a customer”. Using the concept of change, participants will understand that people react to life events (change) in various ways. Some of these ways may be inappropriate, but it is really their attempt to deal with the situation. In this segment, participants will be encouraged to see the person first, without judgment, and attempt to determine the intensity of the emotions being demonstrated by watching body language and listening to the tone and the words that a customer may use. By doing this critical first step, they can determine an appropriate response.

The Service Provider

- In this session, participants will identify their personal impact on the quality of service they choose to provide. We will examine various techniques one can use to remain in control of their own emotions and behaviours so that service is not compromised. Elements of a winning attitude are also explored.

The Interactive Skills

- Participants will be introduced to effective communication techniques, including the art of giving and receiving feedback (criticism) and will be given an opportunity to practice these skills in a supportive environment.



5. Survivor

Looking and Acting the Part

- Appearance – Appropriate clothing and grooming
- Timekeeping – Attendance, punctuality and informing others of absence or lateness
- Following company policies

Meeting Work Standards

- Work Methods – Appearance of work, work efficiency, quality and quantity of work
- Care of equipment and materials

Working with people

- Communication Skills – Giving and Receiving Instructions, and Giving and Receiving Feedback
- Showing initiative

6. Work Search

- Learn how to choose and write a resume format that compliments an individual's personal style.
- Learn how to write a good cover letter
- Develop the “Art” of completing application forms
- Explain and discuss the importance of networking and navigating the hidden job market
- Explain what a work search portfolio should contain
- Explore uses for calling cards and creating calling cards
- Explain Informational Interviews and practice these through role play scenarios
- Learn interview skills and put these skills into practice through “mock” video-taped analysis.