School of TJC Continuing Studies

Tyler Junior College
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Education & Training Plan
Computer Technician (CompTIA A+) Certification Program with Externship

Student Full Name: _____

Start Date: _____ End Date: _____

Program includes National Certification & an Externship Opportunity
Mentor Supported

Tyler Junior College Program with Externship

Course Code:	TJC-IT-CTA
Program Duration:	6 Months
Course Contact Hours:	375
Student Tuition:	$3,999

The Computer Technician (CompTIA A+) Professional

The Computer Technician (CompTIA A+) training offers a standard competency for entry-level service technicians in the computer industry. Earning CompTIA A+ Certification means that an individual possesses the knowledge, skills and customer service skills necessary to be a successful computer service technician offering a nationally-recognized and industry-recognized credential for new entrants into the field. Indeed, CompTIA A+ certification is the most widely-recognized certifications available across the IT industry.

The Computer Technician (CompTIA A+) Program

The CompTIA A+ course will build upon students' existing user-level knowledge and experience with personal computer software and hardware in order to present fundamental concepts and techniques that technicians will use every day on the job. Upon completing this course, students will gain the essential skills and technical expertise necessary to install, upgrade, configure, troubleshoot, optimize, repair and perform preventative maintenance on basic personal computer hardware and operating systems. The CompTIA A+ course provides students with the basic knowledge and skills necessary for a career in PC support. The course is designed to fully prepare students to sit for and pass the CompTIA A+ 220-1001 and 220-1002 certification exams. Course topics include installation, configuration, preventative maintenance of PC hardware components, and the basics of networking, security, virtualization, desktop imaging, and deployment. Students will also gain knowledge of diagnostic and troubleshooting processes for various types of technical issues.

Education and National Certifications

- Students should have or be pursuing a high school diploma or GED.
- Students who complete this program can sit for the following exams:
  - **CompTIA A+ Certification Exams Core 1 (Exam 220-1001) and Core 2 (Exam 220-1002)**

Program Objectives

This program covers the following key areas and topics:

- Hardware: Identifying, using, and connecting hardware components, devices, and connectors
- Windows Operating System: Installing and supporting the Windows OS including command line and client support
- Software Troubleshooting: Troubleshooting PC, laptop, and mobile device issues including application security support
- Networking: Understanding types of networks and connections including TCP/IP, WIFI, SOHO
- Hardware and Network Troubleshooting: Troubleshooting device and network issues
- Identifying and protecting against security vulnerabilities for devices and network connections
- Mobile Devices: Installing and configuring laptops and other mobile devices (wearable technology, fitness monitors, etc.) including cloud computing
- Other OS and Technologies: Understanding the Mac OS, Linux, and mobile OS
- Operational Procedures: Following best practices for safety, environmental impacts, communication, and professionalism

National Certification

Students who complete the Tyler Junior College Computer Technician (CompTIA A+) program will be prepared to sit for the CompTIA A+ Core 1 & 2 (220-1001, 220-1002) Certification national certification exam(s). In order to work as a Computer Technician (CompTIA A+), many states nationwide are requiring that learners achieve national certification prior to working in that state. Students who complete this program are encouraged to complete the practical/clinical externship option with their program. This comprehensive program is designed to prepare students to sit for CompTIA A+ Core 1 & 2 (220-1001, 220-1002) Certification exam(s). Students who complete this program can and do sit for the CompTIA A+ Core 1 & 2 (220-1001, 220-1002) Certification national certification exam(s) and are qualified, eligible and prepared to do so.

Externship / Hands on Training / Practicum

Although not a requirement, once students complete the program, they have the ability to participate in an externship and/or hands on practicum so as to practice the skills necessary to perform the job requirements of a professional in this field. Students will be assisted with completing a resume and/or other requirements necessary to work in this field. All students who complete this program are eligible to participate in an externship and will be placed with a participating organization near their location. The institution works with national organizations and has the ability to place students in externship opportunities nationwide.

Tyler Junior College contact: If students have any questions regarding this program including national certification and externships **, they should call Judie Bower of Tyler Junior College at | (800) 298-5226 or via email at jbow@tjc.edu**

Note : No refunds can be issued after the start date published in your Financial Award document.
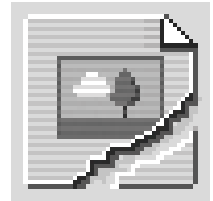
About Tyler Junior College!

Welcome to Tyler Junior College! One of the oldest junior colleges in Texas, the College was established in 1926 with a mission of providing the finest academic education for freshmen and sophomore students. Tyler Junior College remains committed to that goal while also recognizing the changing role of community colleges and the need to provide quality training for technical fields. There are several unique aspects of the healthcare career programs available to students through the School of Continuing Studies at Tyler Junior College (TJC). In addition to enrollment of over 32,000 students annually, Tyler Junior College (TJC) has been the Texas leader in healthcare technician training and education programs for over 12 years. Over the last 12 years, approximately 13,000 students have successfully completed TJC's Pharmacy Technician, Dental Assisting, Medical Billing & Coding, Clinical Medical Assistant and other healthcare programs.

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Tyler Junior College and Pearson Education
Tyler Junior College's eLearning programs were developed in partnership with Pearson Education to produce the highest quality, best-in-class content and delivery necessary to enhance the overall student learning experience, boost understanding and ensure retention. Pearson Education is the premier content and learning company in North America offering solutions to the higher education and career training divisions of colleges and universities across the country aimed at driving quality education programs to ensure student success. Please visit us at **www.pearson.com** .

About Pearson Education
Welcome to Pearson. We have a simple mission: to help people make more of their lives through learning. We are the world's leading learning company, with 40,000 employees in more than 80 countries helping people of all ages to make measurable progress in their lives. We provide a range of education products and services to institutions, governments and direct to individual learners, that help people everywhere aim higher and fulfil their true potential. Our commitment to them requires a holistic approach to education. It begins by using research to understand what sort of learning works best, it continues by bringing together people and organizations to develop ideas, and it comes back round by measuring the outcomes of our products.

Computer Technician (CompTIA A+) Program Detailed Student Objectives:

HARDWARE: PART 1

- Explain how to access, configure, and apply BIOS settings
- Explain motherboard components, their purposes, and properties
- Describe various CPU types and features
- Describe appropriate cooling methods
- Compare RAM types and features
- Describe the function of RAM
- Explain how to install and configure expansion cards
- Explain how to install and configure storage devices and use appropriate media

HARDWARE PART 2

- Describe various connection interfaces and their purposes
- Identify connector types and associated cables
- Describe various power supply types
- Describe the components needed for a custom configuration to meet customer specifications or needs
- Describe various display devices and their features
- Describe how to install and configure various peripheral devices

NETWORKING

- Identify types of network cables and connectors
- Categorize characteristics of connectors and cabling
- Explain properties and characteristics of TCP/IP
- Explain common TCP and UDP ports, protocols, and their purpose
- Compare wireless networking standards and encryption types
- Explain how to install, configure, and deploy a SOHO wireless/wired router using appropriate settings
- Compare Internet connection types and features
- Identify various types of networks
- Compare network devices, their functions, and features
- Describe various networking tools

LAPTOPS

- Describe laptop expansion options
- Explain how to remove and replace laptop hardware and components
- Describe components within the display of a laptop
- Explain features specific to laptops

PRINTERS AND OPERATIONAL PROCEDURES

- Explain the differences between the various printer types
- Summarize the imaging process for printers
- Explain how to install and configure printers
- Explain how to perform printer maintenance
- Identify appropriate safety procedures when repairing a system
- Explain environmental impacts and the purpose of environmental controls
- Describe proper communication and professionalism given a scenario
- Explain the fundamentals of dealing with prohibited content/activity

OPERATING SYSTEMS

- Compare the features and requirements of various Microsoft Operating Systems
- Explain how to install and configure the operating system using the most appropriate method given a scenario
- Use appropriate command-line tools given a scenario
- Use appropriate operating system features and tools given a scenario
- Identify Control Panel utilities to use given a scenario
- Explain how to setup and configure Windows networking on a client/desktop
- Describe how to perform preventive maintenance procedures using appropriate tools
- Explain the differences among basic OS security settings
- Explain the basics of client-side virtualization

SECURITY

- Describe how to apply and use common prevention methods
- Describe common security threats
- Explain how to implement security best practices to secure a workstation
- Explain how to use the appropriate data destruction/disposal method given a scenario
- Explain how to secure a SOHO wireless network given a scenario
- Explain how to secure a SOHO wired network given a scenario

MOBILE APPLICATIONS

- Explain the basic features of mobile operating systems
- Describe how to establish basic network connectivity and configure email
- Compare and contrast methods for securing mobile devices
- Compare and contrast hardware differences in regards to tablets and laptops
- Explain how to execute and configure mobile device synchronization

TROUBLESHOOTING – PART 1

- Explain the troubleshooting theory given a scenario
- Explain how to troubleshoot common problems related to motherboards, RAM, CPU, and power with appropriate tools given a scenario
- Explain how to troubleshoot hard drives and RAID arrays with appropriate tools given a scenario
- Describe how to troubleshoot common video and display issues given a scenario
- Explain how to troubleshoot wired and wireless networks with appropriate tools given a scenario

TROUBLESHOOTING - PART 2

- Explain how to troubleshoot operating system problems with appropriate tools
- Explain how to troubleshoot common security issues with appropriate tools and best practices given a scenario
- Explain how to troubleshoot and repair common laptop issues while adhering to the appropriate procedures
- Explain how to troubleshoot printers with appropriate tools given a scenario

Note: This program can be completed in 6 months. However, students will have online access to this program for a 24-month period.

MICROSOFT OFFICE

- Module Use an integrated software package, specifically the applications included in the Microsoft Office suite
- Demonstrate marketable skills for enhanced employment opportunities
- Describe proper computer techniques for designing and producing various types of documents
- Demonstrate the common commands & techniques used in Windows desktop
- List the meaning of basic PC acronyms like MHz, MB, KB, HD and RAM
- Use WordPad and MSWord to create various types of documents
- Create headings and titles with Word Art
- Create and format spreadsheets, including the use of mathematical formulas
- Demonstrate a working knowledge of computer database functions, including putting, processing, querying and outputting data
- Define computer terminology in definition matching quizzes
- Use the Windows Paint program to alter graphics
- Use a presentation application to create a presentation with both text and graphics
- Copy data from one MS Office application to another application in the suite
- Use e-mail and the Internet to send Word and Excel file attachments
- Demonstrate how to use the Windows Taskbar and Windows Tooltips
- Explain how copyright laws pertain to data and graphics posted on the Internet
- Take the college computer competency test after course completion
- Follow oral and written directions and complete assignments when working under time limitations

Note: Although the Microsoft Office Module is not required to successfully complete this program, students interested in pursuing free Microsoft MOS certification may want to consider completing this Microsoft Office Module at no additional cost.

System Requirements:

Windows Users:

- Windows 8, 7, XP or Vista
- 56K modem or higher
- Soundcard & Speakers
- Firefox, Chrome or Microsoft Internet Explorer

Mac OS User:

- Mac OS X or higher (in classic mode)
- 56K modem or higher
- Soundcard & Speakers
- Apple Safari

iPad Users:

- Due to Flash limitations, eLearning programs are NOT compatible with iPads

Screen Resolution:

- We recommend setting your screen resolution to 1024 x 768 pixels.

Browser Requirements:

- System will support the two latest releases of each browser. When using older versions of a browser, users risk running into problems with the course software.
- Windows Users: Mozilla Firefox, Google Chrome, Microsoft Internet Explorer
- Mac OS Users: Safari, Google Chrome, Mozilla Firefox

Suggested Plug-ins:

- Flash Player
- Real Player
- Adobe Reader
- Java