Program Overview

The one-year PC Technician program will prepare you to troubleshoot hardware and software problems in microcomputer systems. This is accomplished through in-depth training in basic electronics, microcomputer maintenance and repair, and the Windows operating system. Electronics fabrication skills including wiring, soldering, and cable termination are also covered.

Special Features

This program is unique in the state.

Student Profile

As a PC Technician student, you should be able to:

- See similarities or differences in color
- Use independent judgment
- Communicate ideas and information clearly and effectively
- Enjoy scientific and technical work
- Assume responsibility for the quality of your work
- Demonstrate physical ability with fine motor skills

Preparation for Admission

The following experiences will help you prepare for this program:

- Energy
- Electronics
- Algebra
- Physics
- Principles of Technology
- English
- Speech
- Creative Writing
- Computers

Program Outcomes

Employers will expect you, as a PC Technician graduate, to be able to:

- Set up and troubleshoot computer hardware systems.
- Install Windows operating system software.
- Pull and terminate network cable.
- Apply knowledge of DC, AC, and digital circuits to troubleshoot electronic equipment.
- Use hand tools to fabricate and repair electronics equipment and cables.
- Use communication and human relation skills to be successful in the workplace.

Career Outlook

After graduating from the program, you will be ready to start your career as a:

- PC Technician
- Computer Maintenance Technician
- Microcomputer Sales and Service Technician
- Microcomputer System Installation Technician
- Electronics Technician

Curriculum

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PROGRAM REQUIREMENTS

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▲ This course requires a prerequisite and/or corequisite, and must be completed with a grade of “C-” or better.

◆ Appropriate placement score or Introduction to College Writing course required.
Course Descriptions

10631116  
Workstation Management 1 - Credits: 3  
This course is an introduction to workstation components and operating systems. Students learn how to assemble, configure, and troubleshoot workstation devices. Students also learn how the components of the workstations operate. Components include microprocessor, RAM, ROM, storage, I/O, media and data communication devices. Students also learn about data encoding and transmission. Students gain work experience by staffing the Computer Networking Technology Help Desk.

10631117  
Workstation Management 2 - Credits: 3  
This course is a continuation of Workstation Management 1. Students learn about how programs are executed and memory is organized. Operating system concepts such as processes, threads, virtual memory, and file-system organization are covered. Students also learn how to perform basic operating system tasks such as adding users and groups, Management of users and groups with access control lists, policies, and profiles are also covered. Workstation security concepts are discussed. Students gain work experience by staffing the Computer Networking Technology Help Desk. PREREQUISITE: 10631116 Workstation Management 1.

10631119  
Networking 1 (Cisco 1) - Credits: 2  
An introduction to computer networking. Topics covered include the OSI network reference model, networking media and topology, networking devices (hubs, bridges, routers, and switches) and the TCP/IP network protocol. Laboratory practice emphasizes UTP and fiber optic cable termination and testing, and network design. PREREQUISITE: 10631116 Workstation Management 1.

10631133  
DC Circuits - Credits: 4  
The study of DC circuits including current, resistance, voltage, and power in series, parallel, and series-parallel circuits. Laboratory practice includes the use of analog and digital voltmeters, ammeters, and ohmmeters. Computer practice includes Electronics Workbench, a common circuit analysis software program used throughout the program. PREREQUISITE: 10631133 DC Circuits.

10631134  
AC Circuits - Credits: 4  
The study of AC circuits including frequency, period, and phase angles. Also, inductance, capacitance, time constants, and resonance. Laboratory practice includes the use of AC voltmeters and ammeters, the oscilloscope, and function generator. Computer practice includes Electronics Workbench, a common circuit analysis software program used throughout the program. PREREQUISITE: 10631133 DC Circuits.

10631135  
Electronics Fabrication - Credits: 2  
This course emphasizes electronics fabrication skills including point-point wiring, soldering and desoldering with stranded and solid wire, single- and double-sided printed circuit board soldering and desoldering, and the installation and test of common electronic connectors. In addition, common electrical schematic drawing standards are covered using OrCAD Capture. The design and fabrication of single-sided printed circuit boards is also presented using OrCAD Layout. COREQUISITE: 10631133 DC Circuits.

10631136  
Digital Electronics - Credits: 4  
The study of digital electronic devices including logic gates, flip-flops, counters, shift registers, decoders, encoders, displays, programmable logic devices, and analog-to-digital, and digital-to-analog converters. Laboratory practice includes the use of solderless breadboards, and the oscilloscope and logic probe for testing and troubleshooting. Electronics Workbench is used for circuit simulation. PREREQUISITE: 10631133 DC Circuits.

10804113  
College Technical Mathematics 1A - Credits: 3  
Topics include: solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions and operations of polynomials. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.