



**Computer Information Technology Credential:
Computer Hardware/Troubleshooting Repair
Certificate
C25260HT**

This certificate is designed for individuals interested in acquiring advanced technical skills and knowledge to maintain and repair personal computers. Students gain skills in selecting parts, upgrading, building, and configuring personal computers, and installing and configuring operating systems. Major topics include component identification, system configuration, memory, peripheral installation and configuration, device drivers, printers and communication devices, and troubleshooting and diagnostic techniques. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers. This certificate is designed to prepare students for the A+ Certification Examinations offered by CompTIA (Certified Hardware Technician).

Graduates should qualify for employment in business, industry, and government organizations as entry-level PC technicians, helpdesk technicians, or any generalist computer technician.

Program Length: 2 semesters
 Career Pathway Options: Associate in Computer Information Technology or Networking Technology
 Program Sites: Lee Campus – Day and Night Programs

Course Requirements for Hardware/Troubleshooting Certificate

Course No.	Course Name	C-L-SHC
*CIS 110	Introduction to Computers	2-2-3
CTS 120	Hardware/Software Support	2-3-3
CTS 220	Advanced Hard/Software Support	2-3-3
NET 110	Networking Concepts	2-2-3
NOS 110	Operating System Concepts	2-3-3
Total Semester Hours Credit		14/15

*Students may substitute CIS 111 (nontransferable).

CIS 110 Introduction to Computers 2-2-3
 This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitative Option). This course is also available through the Virtual Learning Community (VLC).*

CTS 120 Hardware/Software Support 2-3-3
Prerequisites: CIS 110 or CIS 111
 This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

CTS 220 Adv Hard/Software Support 2-3-3
Prerequisites: CTS 120
 This course provides advanced knowledge and competencies in hardware and operating system technologies for computer technicians to support personal computers. Emphasis is placed on: configuring and upgrading; diagnosis and troubleshooting; as well as preventive maintenance of hardware and system software. Upon completion, students should be able to install, configure, diagnose, perform preventive maintenance, and maintain basic networking on personal computers.

NET 110 Networking Concepts 2-2-3
 This course introduces students to the networking field. Topics include network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols. *This course is also available through the Virtual Learning Community (VLC).*

NOS 110 Operating System Concepts 2-3-3
 This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is placed on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.