COMPUTER NETWORKING TECHNOLOGY, Certificate - 4230

Engineering, Trades & Computer Technologies Department
CIP Code: 11.0901

The Computer Networking certificate prepares students to work in the field of information technology in roles such as network technician, network administrator, systems administrator and customer support. They are trained to design, install, configure, troubleshoot and maintain networks. This program is also valuable to students who are currently employed within the field and wish to update their computer networking knowledge and skills for advancement. The program includes the study of data communications, telecommunications, Windows and Linux Server administration, information security fundamentals, PC repair, TCP/IP, cabling, terminations, network connections, cable testers, network analyzers, NIC's, hubs, bridges, switches, and routers. Elective courses allow the students to learn specialized topics such as Cisco Routing and Switching, Voice over IP (VoIP), Wireless Networking Administration and Virtualization and Cloud Computing. The program is vendor neutral and coordinates with national standards from the Computing Technology Industry Association (CompTIA). Students may complete this certificate at the Harrisburg Campus through various modalities (e.g., on-campus/in-person instruction, hybrid, synchronous remote instruction and/or asynchronous instruction).

Career Opportunities
Computer networking encompasses a broad range of jobs and job titles for CNT graduates including network support technicians, network administrators, network planning analysts, network coordinators, telecommunications specialists, information technology specialists, consultants, market representatives, and related information technologist positions. ***(SOC Code: 15-1150 Computer Support Specialists)***

Competency Profile
This curriculum is designed to prepare students to:
- Configure, manage, maintain and troubleshoot network infrastructure components such as routers, switches and firewalls
- Configure, manage, maintain and troubleshoot Windows and Linux server operating systems and common applications such as Active Directory, Web, Domain Name and database services.
- Demonstrate network protocol knowledge from physical to application layers including TCP/IP protocols and common application layer protocols
- Provide end-user hardware and software technical support
- Utilize security tools and common best practices to implement and secure network architecture

PROGRAM REQUIREMENTS (TOTAL CREDITS = 34)

General Education	Major Requirements		Other Required Courses	
	CIS 126 Computer Hardware	4	Program Electives*	3
	CIS 131 Operating Systems	3		
	CIS 222 Intro to Windows Servers	3		
	CIS 227 Technical Support	3		
	CIS 264 Fundamentals of Linux Administration	3		
	CNT 120 Network Communication Technology I	3		
	CNT 125 Network Communication Technology II	4		
	CNT 140 The Physical Network	3		
	CNT 220 Internetworking	5		
		31		

*Students are to select electives from the following: CISE 100, CNT 250 or CNT 260.
Note: *Students must complete the following courses with a minimum grade of C to graduate: all computer-related courses (CIS, CISE, CNT).*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS
Part time students can complete this program by taking one or more courses each semester.

Summer I		Fall Semester I		Spring Semester I	
CIS 126	4	CIS 131	3	CIS 222	3
CNT 120	3	CIS 264	3	CIS 227	3
		CNT 125	4	CNT 220	5
		CNT 140	3	Program Electives*	3