COMPUTER NETWORKING TECHNOLOGY, Associate in Applied Science Degree - 4590

Engineering, Trades & Computer Technologies Department
CIP Code: 11.0901

The Computer Networking AAS program prepares students for employment 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. 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. Coursework in oral and written communication skills is also included in order to provide these essential skills to needed to excel in today's workplace environment. The program is vendor neutral and coordinates with national standards from the Computing Technology Industry Association (CompTIA). Student may complete 75% of this program at the Harrisburg Campus through on-campus/in-person instruction. The remaining coursework must be completed through various modalities (e.g., hybrid, synchronous remote instruction and 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, systems analysts, network coordinators, telecommunications specialists, information technology specialists, consultants, market representatives, and related information technologist positions.

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
- Describe common legal, ethical and business requirements for securing information; utilize security tools and common best practices to implement a secure network architecture

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I **(or)**	3	CIS 126 Computer Hardware	4	Program Specific Electives**	**9**
ENGL 110 Foundations of Professional Writing	(3)	CIS 131 Operating Systems	3		
COMM 101 Effective Speaking **(or)**	3	CIS 222 Introduction to Windows Servers	3		
COMM 203 Interpersonal Communication	(3)	CIS 227 Technical Support	3		
Humanities & Arts Core Elective*	3	CIS 264 Fundamentals of Linux Administration	3		
Mathematics **or** Science Core Elective	3	CISE 100 Information Security Fundamentals	3		
Social & Behavioral Science Core Elective	3	CNT 120 Network Communication Technology I	3		
First-Year Seminar Elective	1	CNT 125 Network Communication Technology II	4		
Wellness Elective	1	CNT 140 The Physical Network	3		
	17	CNT 220 Internetworking	5		
			34		

Students are to select from the following courses: ART 181 or 182; ENGL 206; FMTH 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course.
** Select program specific electives from the following: CISE 211; CNT 240, 250, 260, 291 or any CNT200-level course.*
<u>Note:</u> *Students must complete the following courses with a minimum grade of C to graduate: all computer-related courses (CIS, CISE and CNT).*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CIS 126	4	CIS 131	3	CIS 222	3	CIS 227	3
CNT 120	3	CIS 264	3	CNT 220	5	CISE 100	3
COMM 101 **or** 203	3	CNT 125	4	Program Elective**	3	Mathematics **or** Science Core Elective	3
ENGL 101 **or** 110	3	CNT 140	3	Social/Behavioral Science Core Elective	3	Program Electives**	6
Humanities/Arts Core Elective*	3			Wellness Elective	1		
FYS Elective	1						