

# COMPUTER NETWORKING TECHNOLOGY, Associate in Applied Science - 4590

*Business, Hospitality, Engineering, and Technology Division*

Students prepare to work in the field of computer networking. They are trained to design, install, configure, and maintain networks. The program includes the study of data communications, telecommunications, Networking Operating System fundamentals, TCP/IP, cabling, terminations, network connections, cable testers, network analyzers, PBX equipment, NIC's, hubs, bridges, switches, and routers. The program is vendor neutral and coordinates with national standards from the National Association of Communication Systems Engineers and the Computing Technology Industry Association. The complete programs are available only at the Harrisburg Campus.

### *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:

- Demonstrate the underlying concepts of network communications
- Utilize current terminology of networking when preparing reports and proposals
- Apply the correct hardware/software technology for effective use in a business environment
- Compare the latest LAN, WAN, and MAN technologies
- Demonstrate the installation, maintenance, and technical support of popular networking hardware/software systems
- Apply network troubleshooting and diagnostic techniques
- Compare the common networking architectures and the network operating systems
- Employ network design and network management skills
- Demonstrate the correct use of client/server systems
- Employ effective oral and written technical communication

## **PROGRAM REQUIREMENTS (TOTAL CREDITS = 70)**

<b>General Education</b>		<b>Major</b>		<b>Other Required Courses</b>	
ENGL 101 English Composition I	3	CIS 222 Introduction to Windows Servers	3	Program Specific Electives**	10
ENGL 102 English Composition II <b>or</b>		CIS 223 Intermediate Windows Servers <b>or</b>			10
ENGL 104 Report and Tech. Writing <b>or</b>		CIS 226 Novell NetWare Administration <b>or</b>			
ENGL 106 Written Bus. Communication	3	CIS 264 Fundamentals of Linux Administration <b>or</b>			
SPCH 101 Effective Speaking <b>or</b>		CIS 265 Fundamentals of UNIX Administration	3		
SPCH 104 Interpersonal Communication	3	CIS 224 Systems Analysis and Design	4		
Core A Elective	3	CIS 227 Technical Support	3		
Core B Elective	3	CNT 120 Network Communication Technology I	3		
Core C Elective (MATH required)	3	CNT 125 Network Communication Technology II	4		
Free Elective	3	CNT 130 Fundamentals of Telecommunication	3		
Physical Education & Wellness	1	CNT 140 The Physical Network	3		
	22	CNT 220 Internetworking	5		
		ELEC 126 Installing & Troubleshooting PC's	4		
		Computer Programming Elective*	3		
			38		

\*Select Computer Programming Elective from the following: CIS 238; CPS 115, 121, 135, 230

\*\* Select program specific electives from the following: CAD 114, 115, 124, 125, 134; CIS 223, 226, 264, 265; CISE 200, 210, 220, 230; CNT 240, 260, 291; ELEC 100, 101, 106, 108, 111, 211, 213, 215; MGMT 121, 201, 204 (May only use one MGMT course (3 credits) for technical electives.)

## RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

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

Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester	
CNT 120	3	CNT 125	4	Program. Elective	3	CNT 222	4	CIS Server Elective	3
ENGL 101	3	CNT 130	3	Core A/B/C	3	CNT 220	5	CNT 224	3
SPCH 101 or 104	3	CNT 140	3			CIS 227	3	Tech Elective	6
Core A/B/C	3	ELEC 126	4			Tech Electives	4	Core A/B/C	3
Free Elective	3	ENGL 102/104/106	3					PE & W	1

Effective Fall 2008 all Associate Degree Programs must meet Diversity (D) and Physical Education and Wellness (W) requirements.