



Network Technology
Credential: Network Infrastructure Certificate
C25340NI

The Network Infrastructure Certificate is a certificate under the curriculum title of Network Technology. This curriculum prepares students to understand and install various models of Cisco routers and switches. This curriculum also develops operating skills needed to successfully manage and support these devices.

Course work includes extensive hands-on experience with different network electronics and support tools. Classes cover installation and support of various network electronics, management software, troubleshooting, and administrative responsibilities.

Graduates should qualify for positions such as: LAN/PC Administrator, Network Control Operator, Network Analyst, and Information Systems Specialist. Graduates are also prepared to sit for certification exams that can result in industry-recognized credentials. Credits earned in this certificate program will transfer into the Associate in Applied Science Degree in Network Technology. Students must meet the higher entrance requirements.

Program Length: 2 Semesters
 Career Pathway Options: Associate in Applied Science Degree in Network Technology.
 Program Sites: Program Sites: Lee Campus - Day Program and Night "Career Centered" Flexible Program

Course Requirements for Network Infrastructure Certificate

Required Major Core Courses (12 SHC)

NET 125	Routing and Switching I	1-4-3
NET 126	Routing and Switching II	1-4-3
NET 225	Adv. Routing and Switching I	1-4-3
NET 226	Adv. Routing and Switching II	<u>1-4-3</u>
		4-16-12

Total Semester Hours Credit: 12

COURSE DESCRIPTIONS

NET 125 Networking Basics 1-4-3

This course introduces the networking field. Emphasis is placed on 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.

NET 126 Routing Basics 1-4-3

Prerequisites: NET 125

This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.

NET 225 Routing and Switching I 1-4-3

Prerequisites: NET 126

This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.

NET 226 Routing and Switching II 1-4-3

Prerequisites: NET 225

This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, and describe the Spanning Tree protocol.