Program Planning Guide

Network Infrastructure Certificate (C25340NI)

Program Length: 2 Semesters
Career Pathway Options: Associate in Applied Science Degree in Network Technology.
Program Sites: North Carolina School of Telecommunications - Day and selected evening courses.
Corporate and career-centered programs

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<th>COURSE</th>
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<td>CLASS</td>
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<td>NET 125 Networking Basics</td>
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<td>NET 126 Routing Basics</td>
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<td>NET 225 Routing &amp; Switching I</td>
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<td>NET 226 Routing &amp; Switching II</td>
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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
Prerequisite: 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
Prerequisite: 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 prerequisite 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
Prerequisite: 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.

August 2015