

CIT 206. CONNECTING NETWORKS (Cisco #4).

Credit Hours: 4

Scheduled hours per week

Lecture: 2

Lab: 2

Other: 2

Catalog Course Description: The last in a series of four courses required to prepare the student for the Cisco CCNA certification. Topics covered in this semester include wide-area network (WAN) technologies and network services for converged applications, data link protocols, and virtual private network (VPN) technologies.

Pre-requisites: Grade of “C” or better in CIT 205

Co-requisites: N/A

Course Learning Outcomes:

- Describe and discuss Cisco Enterprise Architecture design choices
- Describe and discuss WAN technologies
- Describe and demonstrate ability to configure and manage PPP and Frame Relay connections
- Describe and demonstrate ability to configure and manage Network Address Translation (NAT) for IPv4
- Describe and discuss broadband solutions
- Describe and demonstrate ability to configure PPP over Ethernet (PPPoE)
- Describe and discuss VPN technologies
- Demonstrate ability to configure and manage GRE VPN tunnels
- Describe and demonstrate ability to use systematic approaches to troubleshooting networks

Topics to be studied:

- Cisco Enterprise Architecture
- WAN Technologies
- Point-to-Point Protocol (PPP)
- Frame Relay
- Network Address Translation (NAT) for IPv4
- PPP over Ethernet (PPPoE)
- Virtual Private Network (VPN) Technologies
- Simple Network Management Protocol (SNMP) and Netflow
- Troubleshooting with a systematic approach

Relationship of Course to Program or Discipline Learning Outcomes:

X	Identify and describe layers of the OSI and TCP/IP models, and use them effectively in troubleshooting
X	Describe and apply LAN and WAN technologies in wired and wireless environments
	Demonstrate ability to apply workstation and server installation, configuration, management and troubleshooting techniques
X	Demonstrate ability to install, configure, manage, and maintain routing and switching technologies

	Describe and discuss different operating systems and their relationship with hardware, their functions, advantages and disadvantages, and their respective tools and software packages
X	Explain Information Systems and choose appropriate systems based on requirements
X	Describe basic information security and computer ethics

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	X
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	X
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course:

Students will be required to setup and configure a network utilizing devices, protocols, and other topics studied during the semester and in prior networking courses.

Additional information:

This course requires a C or better to enroll into CIT 305 (the next Cisco curriculum).

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