



## MASTER COURSE OUTLINE

Prepared By: Mary Shannon

Date: April 2014

## COURSE TITLE

Cisco Networking: Connecting Networks

## GENERAL COURSE INFORMATION

Dept.: CS

Course Num: 159

(Formerly:)

CIP Code: 11.0901

Intent Code: 21

Program Code: 527

Credits: 5

Total Contact Hrs Per Qtr.: 77

Lecture Hrs: 33

Lab Hrs: 44

Other Hrs:

Distribution Designation: General Elective (GE)

## COURSE DESCRIPTION (as it will appear in the catalog)

Discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network.

## PREREQUISITES

CS 158

## TEXTBOOK GUIDELINES

Textbook and materials to be determined by CS Faculty (Example: *Cisco Packet Tracer current version*)

## COURSE LEARNING OUTCOMES

*Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:*

1. Describe the operations and benefits of virtual private networks (VPNs) and tunneling
2. Describe different WAN technologies and their benefits
3. Configure and troubleshoot serial connections
4. Configure and troubleshoot broadband connections
5. Configure and troubleshoot IPSec tunneling operations
6. Monitor and troubleshoot network operations using syslog, SNMP, and NetFlow
7. Design network architectures for borderless networks, data centers, and collaboration

## INSTITUTIONAL OUTCOMES

## COURSE CONTENT OUTLINE

1. Connecting to the WAN
2. Configuring Serial Connections
3. Broadband Solutions
4. Securing Site-to-Site Connectivity
5. Monitoring the Network

6. Troubleshooting the Network
7. Network Architectures

**DEPARTMENTAL GUIDELINES** *(optional)*

This is the fourth course in the newly revised Cisco Networking Academy CCNA Routing and Switching curriculum. Students will be prepared to take the Cisco CCENT® certification exam after completing CS 156 and CS 157 and the CCNA® Routing and Switching certification exam after completing CS 158 and CS 159.

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**DIVISION CHAIR APPROVAL**

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**DATE**