

**JOLIET JUNIOR COLLEGE
DEPARTMENT OF COMPUTER INFORMATION
AND OFFICE SYSTEMS**

COURSE SYLLABUS

Course Prefix and Number	CNT 208
Course Title	Network Trouble Shooting
Curriculum	Computer Information Systems
Semester Hours	4
Lecture	4
Lab	0
Prerequisites	CNT 205, CNT 206, CNT 207

Catalog Description

This courses teaches students how to baseline and troubleshoot a LAN and WAN environment. Students learn to test and identify problems with routeres and switches in multiprotocol environments. Topics include Ethernet, Fast Ethernet, and Token Ring LANs; and serial, frame, relay, and ISDN BRI WANs. The class is designed to prepare students to pursue the Cisco CCNP examination.

Course Objectives: See attached

Prepared by:

Reviewed by:

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Dept. of CIOS
6/03

Revised 8/05

Ram Raghuraman
Department Chairperson

Date

STUDENT MATERIALS

A. Textbook:

Title: Cisco Internetwork Troubleshooting

Author: Dan Farkas, Laura Chappell

Publisher: Cisco Press

AND

Title: Cisco Networking Academy Program: Semester 8 Lab Book

Author:

Publisher:

B. Other Required Materials

Student Evaluation (Type of Grading)

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FORM C, Part II: TOPICAL OUTLINE

Course Prefix and Number: CNT 208 Title: Network Trouble Shooting

Week	Unit, Topic, Class Activity (Indicate approximate time allotment for each topic/unit)	Comments
1	Troubleshooting Methodologies Considerations in Troubleshooting, Problem-Solving Model	
2	Management and Diagnostic Tools Network Troubleshooting Tools and Basic Network Management	
3	Concepts Network Management Software, Router Diagnostic Commands Logging and Error Message Formats	
4	Protocol Overview Network Services, Layer 2 Protocol Overview - LAN Protocols Layer 2 Protocol Overview - WAN Protocols	
5	Protocol Overview Network Services, Layer 2 Protocol Overview - LAN Protocols Layer 2 Protocol Overview - WAN Protocols	
6	Troubleshooting in a LAN Switch Environment Spanning Tree and VLANs, Common LAN Switching Problems Switch Troubleshooting Tools show Commands to Verify Switch Settings	
7	Troubleshooting VLANs VLAN Review, VLAN Troubleshooting Scenarios General VLAN Troubleshooting Issues Router VLAN show and debug Commands	
8	Routing and Switching Processes Tracing Packets through a Router, Packet Switching Paths Performance Issues Affecting Packet Switching Low-Level Troubleshooting	
9	Troubleshooting Frame Relay Frame Relay Overview, Frame Relay Troubleshooting Frame Relay show and debug Commands	

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FORM C, Part II: TOPICAL OUTLINE

Course Prefix and Number: CNT 208 Title: Network Trouble
 Shooting

Week	Unit, Topic, Class Activity (Indicate approximate time allotment for each topic/unit)	Comments
10	Troubleshooting ISDN ISDN Overview, ISDN Troubleshooting ISDN show Commands, ISDN Debugging	
11	Novell IPX Novell Overview, IPX Configurations, Troubleshooting IPX IPX show Commands, IPX debug Commands	
14	Troubleshooting OSPF OSPF Overview, Troubleshooting OSPF, OSPF Case Study OSPF show Commands, Debugging OSPF	
15	Troubleshooting BGP BGP Overview, Basic BGP Configuration, BGP show Commands Troubleshooting Neighbor Negotiation and Route Propagation	

FORM C, PART II

OBJECTIVES

Upon completion of CNT 208, students will be able to perform network-troubleshooting tasks in areas such as:

1. OSI Layers 1, 2, and 3
2. TCP/IP, LAN switching, VLANs, Frame Relay, ISDN, Appletalk, Novell, EIGRP, OSPF, BGP