

# Minnesota State College Southeast

## NWAT 2611: CISCO LAN Connectivity

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 2

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course introduces LAN segmentation involving bridges, routers and switches. Students will explore the features and benefits of Fast Ethernet and virtual LANs. Students will be required to work with bridges, routers, and switches in various segmentation scenarios. (Prerequisites: NWAT1641, NWAT1649, NWAT1670) (3 credits: 2 lecture/1 lab)

**B. COURSE EFFECTIVE DATES:** 05/22/2007 - Present

**C. OUTLINE OF MAJOR CONTENT AREAS**

**D. LEARNING OUTCOMES (General)**

1. Configure router LAN segmentation
2. Explain router segmentation benefits
3. List required IPX address types
4. Troubleshoot network congestion
5. Describe network congestion
6. Describe half-duplex Ethernet operation
7. Describe full-duplex Ethernet operation
8. Describe switching methods
9. Install switch LAN segmentation
10. Install router LAN segmentation
11. Develop a threaded case project
12. Configure switch LAN segmentation
13. Explain switch segmentation benefits
14. Configure bridge LAN segmentation
15. Describe switch LAN segmentation
16. Describe router LAN segmentation
17. Describe bridge LAN segmentation
18. Describe LAN segmentation advantages
19. Describe LAN segmentation
20. Analyze Novell IPX router operations
21. Configure Novell interfaces
22. Configure SAP filters
23. Install Novell IPX
24. Configure IPX access lists
25. List required encapsulation types
26. Install bridge LAN segmentation
27. Display interpersonal communication
28. Configure VLANs
29. Explain VLANs
30. Troubleshoot various LAN problems
31. Identify ACL tasks
32. Explain extended ACLs
33. Explain standard ACLs
34. Place IP access lists
35. Configure IP access lists
36. Explain IGRP operations
37. Explain bridge segmentation benefits
38. Display safe work habits
39. Describe Fast Ethernet features
40. Display troubleshooting techniques
41. Display professionalism
42. Explain virtual LANs benefits
43. Describe virtual LANs
44. Explain Spanning Tree Protocols benefits

45. Describe Spanning Tree Protocols operations
46. Distinguish between cut-through and store-and-forward
47. Describe LAN switching store-and-forward
48. Describe LAN switching cut-through
49. Describe Fast Ethernet distance guidelines
50. Describe Fast Ethernet guidelines
51. Explain Fast Ethernet benefits
52. Display teamwork attitude

**E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted