CIS 58.81D Course Outline as of Spring 2011

CATALOG INFORMATION

Dept and Nbr: CIS 58.81D   Title: CISCO NETWORKING 4
Full Title: Cisco Networking 4
Last Reviewed: 3/26/2001

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	2.00	8	Lab Scheduled	35.00
		Contact DHR	1.50		Contact DHR	26.25
		Contact Total	5.50		Contact Total	96.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00   Total Student Learning Hours: 166.25

Title 5 Category: AA Degree Applicable
Grading: Grade Only
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:
Formerly:

Catalog Description:
Fourth semester of Cisco's Networking Academy curriculum. Topics include LAN Switching, WAN Technology, selecting network capabilities, PPP, ISDN, Frame Relay, Network Management, and Troubleshooting.

Prerequisites/Corequisites:
Course Completion or Current Enrollment in CIS 58.81C

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: Fourth semester of Cisco's Networking Academy curriculum. Topics include LAN Switching, WAN Technology, selecting network capabilities, PPP, ISDN, Frame Relay, Network Management, and Troubleshooting. (Grade Only)
Prerequisites/Corequisites: Course Completion or Current Enrollment in CIS 58.81C
Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:

Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

			Effective:	Inactive:
AS Degree:	**Area**		Effective:	Inactive:
CSU GE:	**Transfer Area**		Effective:	Inactive:
IGETC:	**Transfer Area**		Effective:	Inactive:
CSU Transfer:		Effective:	Inactive:	
UC Transfer:		Effective:	Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Students will:
1. Differentiate between the following WAN services: LAPB, Frame Relay, ISDN/LAPD, HDLC, PPP, and DDR.
2. Recognize key Frame Relay Terms and features.
3. Examine and categorize commands to configure Frame Relay LMIs, maps, and subinterfaces.
4. Examine and categorize commands to monitor Frame Relay operation in the router.
5. Identify PPP operations to encapsulate WAN data on Cisco routers.
6. Analyze the relevant use and context for ISDN networking.
7. Identify ISDN protocols, function groups, reference points, and channels.
8. Test Cisco's implementation of ISDN BRI.

Topics and Scope:

1. LAN Switching
2. Virtual LANs
3. LAN Design
4. Routing Protocols
5. Access Control Lists
6. IPX Routing
7. WAN Technology
   a. WAN Devices
   b. How WANs Relate to the OSI Model
   c. WAN Encapsulation Formats
   d. WAN Link Options
   e. WAN Communication
   f. The First Steps in WAN Design

8. How to Identify and Select Networking Capabilities
9. PPP
   a. PPP Session Establishment
   b. PPP Authentications
10. ISDN
   a. How ISDN Relates to the OSI Model
   b. ISDN Uses
   c. ISDN Services: BRI and PRI
   d. ISDN Configuration Tasks
   e. Dial On Demand Routing
11. Frame Relay Technology
   a. LMI: Cisco's Implementation of Frame Relay
   b. LMI Features
   c. Frame Relay Subinterfaces
   d. The Configuration of Basic Frame Relay
12. The Administrative Side of Network Management
13. Monitoring the Network
14. Troubleshooting Networks
15. Basic Networking Knowledge
   a. Physical Layer
   b. Data Link Layer
   c. Network Layer
   d. Transport Layer
   e. TCP/IP Fundamentals
   f. TCP/IP Suite: Utilities
   g. Remote Connectivity
16. Troubleshooting the Network
17. OSI Model
18. Creating Subnets
19. Router Commands

Assignment:

1. Individual hands-on exercises to demonstrate each topic.
2. Reading approximately 50 pages weekly from the textbook.
3. Participate in class discussion topics.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Quizzes, Exams, Hands-on computer exercises	Problem solving 20 - 50%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

SET UP, MAINTAIN AND TROUBLESHOOT NETWORKS	Skill Demonstrations 20 - 50%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion, PERFORMANCE EXAM(S)	Exams 20 - 50%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
"CCNA Guide to Cisco Networking", by Kurt Hobson - Course Technology 2000