DEPT. Computer Careers  COURSE NUMBER: CST2291
NUMBER OF CREDITS: 3 credits  COURSE TITLE: Windows Network Infrastructure

CATALOG DESCRIPTION: This course will cover how to plan a network infrastructure around features supported by Windows. Issues such as network protocol and services are introduced. This includes using the Internet work Packet Exchange/Sequences Packet Exchange (IPX/SPX) – compatible protocol to integrate with Novell Netware. Students will learn how to utilize, manage, and configure the TCP/IP protocol and features such as NetBIOS, WINS, DHCP, and DNS. Students will learn to configure, manage, and troubleshoot networks routing and remote access, including setting up virtual private networks (VPN’s). Hands-on, practical experience, exercises will incorporate into this course. This course helps students to prepare for Microsoft certification.

AUDIENCE: Computer Careers students and IT professionals who need to support Windows Network Infrastructure Administration or who plan to take the related Microsoft Certified Professional exam.

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)
Area: by meeting the following competencies:
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PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:
CST1111 – File Structures
CST1190 – Introduction to Networking
CST2223 – Windows Client/Server Administration

LENGTH OF COURSE: One Semester

THIS COURSE IS USUALLY OFFERED:
Every other year ☐ fall ☑ spring ☑ summer ☐ undetermined ☐

Four goals are emphasized in course at Minnesota West Community & Technical College:
1) ACADEMIC CONTENT: The student will achieve the advanced level of knowledge and skills needed to Design & Implement a Windows Network Infrastructure.
2) THINKING SKILLS: The student will accurately design and set up a Windows environment.
3) COMMUNICATIONS SKILLS: The student will begin to demonstrate appropriate communication techniques in working with fellow students to complete assignments.
4) HUMAN DIVERSITY: The student will gain self awareness regarding their feelings towards people of different cultures, value systems and socioeconomic status.

TOPICS TO BE COVERED: Subnet Masks, DNS Server, Basic Network Protocols, OSI, MS Certificate Server, VPNs, RAS, RIP, OSPF
LIST OF EXPECTED COURSE OUTCOMES:
1. Determine correct subnet mask for specified number of hosts or networks needed.
2. Demonstrate RAS installation
3. Demonstrate VPN installation
4. Demonstrate DHCP set up
5. List 7 layers of OSI model
6. Set Up DNS Server
7. Manage the Windows Internet Name Service
8. Manage IP Routing
9. Manage Remote Access Services
10. Manage Virtual Private networking
11. Manage IP Security
12. Install and configure Network Clients
13. Manage Network address Translation

LEARNING/TEACHING TECHNIQUES used in the course are:
- Collaborative Learning
- Problem Solving
- Student Presentations
- Interactive Lectures
- Creative Projects
- Individual Coaching
- Lecture
- Films/Videos/Slides
- Demonstrations
- Other (describe below)
- Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
- Reading
- Tests
- Individual Projects
- Oral Presentations
- Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- Group Problems
- Term Paper
- Other (describe below)

The information in this course outline is subject to revision

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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