Des Moines Area Community College

Course Information – EFFECTIVE Aug. 2006

Acronym/Number CAD 155 **Historical Ref** CADT 406

Title Networking Systems Involving CAD

Credit breakout	3	2	2	0	0
	(credit	lecture	lab	practicum	work experience)

PREREQUISITE(S):

COURSE DESCRIPTION:
Network system key features and functionality will be covered. System file management will be addressed. Operating systems and hardware will be examined. Relationships between a computers hardware and software will be taught.

COURSE COMPETENCIES:
During this course, the student will be expected to:

1. Explain devices on networks.
   - 1.1 Describe desktop computers, mid-range computers and servers.
   - 1.2 Describe PDAs, Peripheral Devices and Internetworking devices.

2. Examine internal computer components.
   - 2.1. Describe the function of the CPU, memory, and NICs.
   - 2.2. Examine various bus configurations.
   - 2.3. Discuss removal storage, hard disk, cdrom, and DCD technology.
   - 2.4. Discuss computer care and maintenance.

3. Discuss software and operating systems.
   - 3.1. Describe programs and process.
     - 3.1.1 Master/Slave, Peer-to-Peer, and Client/Server.
   - 3.2. Identify the function of device drivers.
   - 3.3. Discuss network management software.
   - 3.4. Discuss popular operating systems.
   - 3.5. Install/configure current operating system.

4. Analyze carrier signals, cable types, and network topologies.
   - 4.1 Discuss communication and signals.
   - 4.2 Identify network topologies.
   - 4.3 Describe physical cable types.
   - 4.4 Explain wireless transmission.
   - 4.5 Describe structured cable plant.

5. Identify computer protocols and services.
   - 5.1 Discuss different protocols.

5.2 Discuss overview of the layers of protocols and services.
5.3 Describe communicating across a network.

6. Examine the OSI model.
   6.1 Describe the physical layer.
   6.2 Describe the data link layer.
   6.3 Describe the network layer.
   6.4 Describe the transport layer.
   6.5 Describe the session layer.
   6.6 Describe the presentation layer.
   6.7 Describe the application layer.

7. Explore Local Area Networks(LANs).
   7.1 Discuss LAN data link protocols.
   7.2 Describe Ethernet.
   7.3 Describe token ring and FDDI.
   7.4 Describe wireless LANs.
   7.5 Identify LAN software architectures.
   7.6 Discuss information flow between client and server.

8. Identify network components.
   8.1 Identify function of repeaters and hubs.
   8.2 Describe bridges.
   8.3 Discuss switches and routers.
   8.4 Describe Gateways.

9. Explore Wide Area Networks (WANs).
   9.1 Discuss point-to-point WAN services.
   9.2 Describe switched WAN services.
   9.3 Explain choosing WAN products and services.

10. Incorporate course networking elements.
   10.1 Install/configure client machine.
   10.2 Design/layout topology.
   10.3 Create small peer-to-peer network.

CAD 155

COMPETENCIES REVIEWED AND APPROVED BY:

DATE: _____

FACULTY:
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3.
4.
5.
6.

Effective date: August, 2004

by: John Leetch

Campus: **A** B C U N W OC

extension: 7311

Revision(s): _____