

St. Edward's University
MCIS 6308
Internet and Networking Technologies
Spring, 2003

Location: PEC 211
Date & Time: Monday, 6:00 –8:50pm

Text: Panko, Raymond R. (2002) *Business Data Networks and Telecommunications*. (4th edition) Upper Saddle River: Prentice Hall.

Course Description (from Catalog):

This course will provide students with the basic knowledge and skills to understand, categorize, design, implement and manage present computer/networking technologies used in an Information System. Students will also explore the new services and large-scale networks available to create virtual organizations. Subjects such as Computer platforms, Mainframes, Client/Server technologies, Middle Tier Architecture, Middleware, Networking, RAID, Local Area Networks, Wide Area Network Technologies, Internet, TCP/IP, Web technologies and Languages, will also be covered.

Prerequisite: ISMG 5300.

Course Objectives:

The goal of this course provides the student with a managerial perspective of networking technologies used to move data, voice and video information.

Upon completing this course the student will be able to:

- Describe the basic components of networks, and how these components work.
- Describe the OSI and TCP/IP protocols.
- Analyze a typical business network configuration.
- Identify management procedures for effectively keeping networks operational.
- Describe network services and virtual organizations.
- Describe security threats and protection procedures.

Course Format:

Class time will be devoted to lectures, discussions, group projects and presentations. Lectures and discussions will cover the material from the textbook and supplemental materials. Students will complete a group project during this course and present the results in class. Grades for the course will be based on assignments, classroom participation, group project and three examinations.

General Requirements:

Current syllabus for this course may be obtained from professor. This is a sample syllabus and should not be used by students enrolled in this course.

- Students are expected to have read the assigned material from the textbook before coming to class.
- Part of your grade will be based on class participation. It is essential that you be in class on time. If you will be unable to attend a class, please let me know as soon as possible.
- Formal written documents should follow the format described in the APA Publications Guide, 5th Ed. Failure to follow this format will affect your grade. See http://www.vanguard.edu/faculty/ddegelman/index.cfm?doc_id=796
- We will be using the Blackboard system for this course. All coursed materials will be posted on this system. I will also post course related announcements on this system as well. You will submit all homework assignments and your project report online using the Blackboard Digital Drop Box. Due dates for each submission will be posted with the assignments. Late submissions will be penalized unless you have notified me of your situation before the deadline.

Class Policies:

Office Hours: I will be available from 5:00 – 5:50pm before each class. If you need to contact me at any other time, please use e-mail.

Academic Honesty: Appropriate student conduct is outlined in the Student Handbook. Any violations of these policies will be dealt with in the strictest manner possible according to the guidelines published in the handbook. All work submitted for grading should reflect your own work. Each student is expected to have contributed equally in the group project.

Special Accommodations: If you have a medical, psychiatric, or learning disability and require special accommodation or other requirement in this class, please let me know early in the semester or as soon as you are eligible. You will first need to provide documentation of the disability to the Student Disability Service Office located in Moody Hall 115 in Academic Planning Support.

Grading Policy:

Make-up examinations must be scheduled prior to the date of the examination. Assignments are due on the date specified. Late submissions will be penalized 20% per week. I will post all grades on Blackboard as soon as possible.

The final grade will be determined as follows:

Exam 1	20%	A = 100 – 90
Exam 2	20%	B = 89 – 80
Exam 3	20%	C = 79 - 70
Group Project/Presentation	20%	D = 69 – 60
Homework Assignments	10%	F = below 60
Class participation	10%	

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Tentative Class Schedule:

Date	Subject	Textbook Readings
Jan 13	Orientation: Review of course goals, class policies, description of assignments and examinations. Introduction to network technologies: Basic network elements, client/server architecture, packet switching, quality of service, general layout of networks.	Chapter 1
Jan 20	Martin Luther King Day	No class
Jan 27	Network Standards: Layered communications, switches and routers, encapsulation, TCP/IP and OSI standards, other architectures.	Chapter 2
Feb 3	The Physical Layer: Analog and Digital signaling, YTP and fiber cabling, radio propagation, basic topologies.	Chapter 3
Feb 10	A Simple Ethernet Network: Wiring, hubs and switches, NICs, CSMA/CD, server setup, client setup, network operating systems.	Chapter 4
Feb 17	Exam 1 (1 hour) Chapters 1-4. Other LAN Technologies: Large Ethernet networks, wireless LANs, ATM LANs, legacy LANs.	Chapter 5
Feb 24	Telephony: Basic telephone services, integration of voice and video, PBXs, PSTN architecture, cellular systems.	Chapter 6
Mar 3	Wide Area Networks: Difference between WANs and LANs, modems, broadband and satellite systems, X.25, Frame Relay, ATM, VPNs.	Chapter 7
Mar 10	Spring Break	No class
Mar 17	TCP/IP Internetworking: Routing operation, DNS, ICMP, TCP UDP, Layer 3 and 4 switches.	Chapter 8
Mar 24	Exam 2 (1 hour) Chapters 5-8 Network Security: General protection schemes, attacks, firewalls, authentication and encryption, digital certificates, wireless security, security audits.	Chapter 9
Mar 31	Network Management: Network management and systems administration, access control, configuration control, SNMP, LDAP, backups, protocol analyzers, monitoring systems.	Chapter 10
Apr 7	Network Applications: Client/ Server architectures, World Wide Web and e-commerce, web services, SOAP, XML, peer-to-peer computing.	Chapter 11
Apr 14	Group Presentations	
Apr 21	Exam 3 (1 hour) Chapters 9-11 Wrap-up and discussion of future trends.	

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