

MISY 3360 BUSINESS DATA COMMUNICATION SYSTEMS
SUMMER I, 2016 SESSION
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OFFICE HOURS: EAGLE PASS T 8:00 AM-4:00 PM

OR BY APPOINTMENT ANYTIME

I will be available by phone, e-mail or in my office to offer help on any subject related to the course. As we progress in the course, I may make changes to this syllabus to accommodate any particular subject area. In that sense, this syllabus is a guideline, not a contract.

Required Text:

Business Data Communications and Networks 11e,

Jerry Fitzgerald and Alan Dennis, John Wiley & Sons ISBN 978-1-1180-8683-4

1. **Program Objectives:**

1. Students will demonstrate understanding the integration of information technologies to effectively transfer data using a computer network.
2. Students will demonstrate how information technology support key business functions.
3. Students will understand legal and ethical issues related to business networks and data communications.

2. **Course Objectives:** The student will be able to:

1. Be familiar with the history of communications, information systems, the internet and the major components of and types of networks. Be aware of the applications of data communications networks. Understand the role of network layers. Be familiar with the role of network standards.

Assessment: Written exam, written chapter exercises and demonstration exercises.

2. Demonstrate knowledge of how the Web works. Understand host-based, client-based and client-server application architecture. Understand how e-mail works. Be familiar with how FTP, Telnet and instant messenger works. Be familiar with the different types of network circuits and media. Understand the different types of data transmission, digital transmission of digital data, analog transmission of digital data, and digital transmission of analog data. Understand how modems and multiplexing works.

Assessment: Written exam, written chapter exercises and demonstration exercises.

3. Understand the role of the data link layer. Become familiar with two basic approaches of controlling access to the media and with common sources of error and their prevention. Understand three common error detection and correction methods. Demonstrate knowledge of

commonly used data link protocols. Be aware of four transport/network layer protocols. Describe how packetizing and linking to the application layer works. Be familiar with addressing and routing. Understand how TCP/IP works.

Assessment: Written exam, written chapter exercises and demonstration exercises.

4. Be aware of the roles of LANs in organizations. Understand the major components of LANs, traditional Ethernet LANs and switched Ethernet LANs. Identify the best practice recommendations for LAN design. Describe how to improve LAN performance. Understand the major components of WLANs. Be familiar with Wi-Max and Bluetooth WLANs. Describe how to improve WLAN performance. Be familiar with WLAN security. Identify the best practice recommendations for WLAN design. Understand the internetworking devices used in BNs and common backbone architectures. Be familiar with ATM and gigabit Ethernet. Describe how to improve BN performance. Identify the best practice recommendations for backbone design.

Assessment: Written exam, written chapter exercises and demonstration exercises.

5. Understand circuit-switched services, dedicated-circuit services, packet-switch services and VPN services and their architectures. Identify the best practice recommendations for MAN/WAN design. Describe how to improve MAN and WAN performance. Understand the overall design of the internet. Be familiar with DSL, cable modem, and Wireless Application Protocol. Be aware of the Internet 2.0.

Assessment: Written exam, written chapter exercises and demonstration exercises.

6. Identify the major threats to network security. Demonstrate knowledge on how to conduct risk assessment, how to conduct business continuity planning and how to prevent intrusion. Be familiar with the overall process of designing and implementing a network. Identify techniques for developing a logical network design and a physical network design. Understand the roles and functions of network management software and tools.

2. **Assessments:** There will be an assessment for each course module.

Note: It is a policy for this course that after the due date there will be no make-up or reposition for the work required; this policy includes homework assignments, and online tests.

3. **Course Grading:**

Projected Grade Distribution	
A	90%
B	80%
C	70%
D	60%
F	

CLASS SCHEDULE FOR MISY 3360, BUSINESS DATA COMMUNICATION SYSTEMS

<u>Date</u>	<u>Chapter /Topic</u>	<u>Module</u>	<u>Assignments and tests</u>
Jun 13	1 Introduction	1	Assessment available from 6:00 AM – to Midnight
Jun 16	2 Application Layers 3 Physical Layer	2	Assessment available from 6:00 AM – to Midnight
Jun 20	4 Data Link Layer 5 Network and Transport Layers	3	Assessment available from 6:00 AM – to Midnight
Jun 23	6 Wired and Wireless Local Area Network 7 Backbone Networks	4	Assessment available from 6:00 AM – to Midnight
Jun 27	8 Wide Area Networks 9 The Internet	5	Assessment available from 6:00 AM – to Midnight
Jun 30	10 Network Security 11 Network Design	6	Assessment available from 6:00 AM – to Midnight
Jul 5	12 Network Management	7	Assessment available from 6:00 AM – to Midnight