Sul Ross State University - A Member of The Texas State University System

CS3310-Computer Communication

Fall, 2015

Instructor: Dr. Rafael Azuaje

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Office Hours: TBA

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Class: 3:30 pm - 4:45 pm MW, Briscoe Administrative 302

Course Purpose/Objectives:

By the end of the quarter, you will be able

1. Outline the basics components of a computer network using both the TCP/IP protocol suite and the OSI model.

2. Identify the various types of network systems, including local area networks, metropolitan area networks, wide area networks, and voice/data delivery networks.

3. Enumerate the various transmission media commonly used in carrier systems, i.e. twisted pair, coaxial cable, fiber optic cable, terrestrial microwave, satellite, as well as other wireless technologies.

4. Recognize the basics of data communications, including data, signals, conversions between data and signals, encoding techniques, multiplexing, and modulation.

5. Identify the various types of error detection and error corrections schemes.

6. Identify the basics of T-carrier systems, frame relay, asynchronous transfer mode, DSL, and cable modems, and be able to compare and contrast their characteristics.

7. Describe the basic operating procedures of the Internet and how it relates to data and voice communications.

8. Enumerate the differences between the wireless telephone systems D-AMPS, TDMA, CDMA, GSM, and others.

9. Document the characteristics of local area networks, including hub and switch technologies.

10. Complete a case study in which, given a minimum set of requirements, you will recommend wide area network solutions.

Prerequisite:

Text/Materials:

Text: Data Communications and Computer Networks: A Business User's Approach by Curt White, ISBN-10: 1133626467, ISBN-13: 978-1133626466
Publisher: Cengage Learning; 7 edition

Handouts: Additional handouts may be required. Instructor will provide information on obtaining this material.

Grading and Evaluation Criteria:

Letter grades will be determined using a standard percentage point evaluation as outlined below.

A 90 - 100 points

B 80 - 89 points

C 70 – 79 points

D 60 – 69 points

F Below 60 points

The final grade will be computed on the following weights:

Exam 1 (based on chapter 1 & 2) = 10% of your grade

Exam 2 (based on chapter 3 & 4) = 10% of your grade

Exam 3 (based on chapter 5 & 6) = 10% of your grade

Exam 4 (based on chapter 7 & 8) = 10% of your grade

Final Exam (based on chapter 9 &10) = 20% of your grade

Final project = 20% of your grade

Assignments = 15% of your grade

Participation = 5% of your grade

Total Points 100

Course Policies:
Exams, quizzes and assignments: **NO MAKE-UPS ARE ALLOWED**, unless medical or extreme conditions are present.

Academic dishonesty
You are expected to do your own work on all assignments, exams, quizzes, and projects. Any dishonest work will be penalized with a grade of zero.

Attendance
Any student who accumulates 5 absences will be automatically dropped from this course.

Need for assistance
Qualified students with disabilities needing academic or other accommodations to ensure full participation in the programs, services and activities at Sul Ross State University should contact the Disabilities Services Coordinator, in Counseling and Prevention Services, Ferguson Hall 112, Box C- 117, Alpine, Texas 79832.

Posting of Grades
As soon as assignments, exams, and quizzes are graded, the grades will be posted in Blackboard.

Readings and Exam Dates

Week	Topics	Chapter
1	Introduction to Computer Networks and Data Communications	1
2	Fundamentals of Data and Signals	2
3	Conducted and Wireless Media	3
4	Making Connections	4
5	Making Connections Efficient: Multiplexing and Compression Exam 1	5
6	Errors, Error Detection, and Error Control	6
7	Local Area Networks: Part I	7
8	Local Area Networks: Part I (continued)	
9	Local Area Networks: Part II	8
10	Introduction to Metropolitan and Wide Area Networks Exam 2	9

11	The Internet	10
12	The Internet (continued)	
13	Voice and Data Delivery Networks	11
14	Network Security	12
15	Network Design and Management	13
16	Final exam	