Course MIS 6316 Data Communications
Instructor Prithi Narasimhan
Term Fall 2016

Course Information

Course Number/ Section	MIS 6316.002
Course Title	Data Communications
Term	Fall 2016
Days and Times	Wednesdays 1:00 PM to 3:45 PM. Except Fall Break and Thanks Giving Holidays (Monday, 21st Nov to Saturday, 26th Nov)
Exam Dates	Exam 1: 12th October Exam 2: 7th December
Location	JSOM 1.117

Instructor Contact Information

Instructor	Prithi Narasimhan
Office Phone	(972) 883-5007
Email Address	Please use e-learning to contact me - Course Messages
Office Location	JSOM 3.811
Office Hours (By appointment)	Tuesdays - 12:00 PM to 1:30 PM and 5:30 PM to 6:30 PM Wednesdays - 11:45 AM to 12:45 PM Thursdays - 11:30 PM to 12:30 PM Fridays - 2:45 PM to 3:45 PM

Teaching Assistant Contact Information

Teaching Assistant	Amit Ramteke
Email Address	axr147230@utdallas.edu
Office Hours	TBA
Office Location	TBA

Prerequisite or Corequisite

There are no pre-requisites for this class. Some basic knowledge of arithmetic and logarithms is expected.

Course Description

Advances in networking and communication technologies have made the network inseparable from the computers it links together. Information Systems managers need to have an in-depth understanding of a multitude of issues related to data communications ranging from the technical to the managerial in

order to make educated decisions regarding them. This course covers key aspects of data communications - the fundamentals (including models and standards, throughput and capacity, signaling and transmission, media and wireless basics, encoding schemes and error detection/flow control), switching and networking (including multiplexing and switching, impact of packet size, routing, LANS and cellular concepts like CDMA), and security (including threats, security requirements, symmetric and public-key encryption schemes).

Learning Outcomes

1. Acquire a thorough understanding of business data communications and networking requirements.
2. Understand communications technologies well enough to analyze and design business data network applications.
3. Evaluate, select, and implement communication options within organizations.
4. Consider management, security, and business related issues as they relate to the field.

Required Texts & Materials

Business Data Communications by W. Stallings and T. Case, Seventh Edition 2012, Prentice Hall, ISBN-10: 0133023893; ISBN-13: 9780133023893.

Textbooks can be ordered online through Off-Campus Books or the UTD Bookstore. They are also available in stock at both bookstores.

Course Schedule

This is a **tentative** class schedule; changes to the schedule will be posted in eLearning. The descriptions and timelines contained in the syllabus are subject to change at the discretion of the Professor. There are 15 meetings in this course including the two exams. The following gives a tentative outline and sequence of the topics to be covered or the activities to take place (exams or assignments) in these meetings. Assignments are due at the beginning of class; for example, an assignment due in Class 2 should be submitted through elearning before the start of Class 2.

Date	Meeting # / Week	Topic	Assignment Due	References
Wednesday, August 24, 2016	1	Intro to Data Communications		Ch1, Slides, Appendix L
Wednesday, August 31, 2016	2	Data Transmission Concepts		Chapter 4
Wednesday, September 7, 2016	3	Physical Layer: Transmission Media	Assignment 1: Data Transmission	Ch 12: Section 12.3 and Contents from Slide
Wednesday, September 14, 2016	4	Encoding Signals	Assignment 2: Guided Medium	Ch 5, Section 5.1 and 5.2
Wednesday, September 21, 2016	5	Transmission, Error Detection and Flow Control	Assignment 3: Encoding and VOIP	Ch 6 from 6.2 onwards, Ch 15 till 15.3 Contents from slides.
Wednesday, September 28, 2016	6	Switching and Multiplexing. Network Design Approaches	Assignment 4: Error Detection	Ch 6 from 6.2 onwards, Ch 15 till 15.3 Contents from slides.
Wednesday, October 5, 2016	7	Application Layer and the Internet: Exam Highlights	Assignment 5	Ch 9 and 10.
Wednesday, October 12, 2016	8	Exam 1		
Wednesday, October 19, 2016	9	Datalink Layer: LAN/ WAN Technologies		Slides
Wednesday, October 26, 2016	10	Network Layer	Assignment 6	Ch 11 and Exclusive Slide Contents
Wednesday, November 2, 2016	11	Transport Layer: TCP/ IP and UDP Protocols Some Networking Protocols	Assignment 7	CH 8, Chapter 19 (SSL) and Slides
Wednesday, November 9, 2016	12	Network Security Network Management		Slides, ch 18
Wednesday, November 16, 2016	13	Network Security Techniques	Assignment 8	
Wednesday, November 23, 2016		******* Fall Break ******		
Wednesday, November 30, 2016	14	Guest Lecture/ Cryptography in Telecommunication Networks		
Wednesday, December 7, 2016	15	Exam 2		

Assignment Guidelines

- All reading is to be completed before class on the date posted.
- All assignments must be submitted at the beginning of class.
- Assignments must adhere to the APA style guide of formatting, citing, and referencing.
- Descriptions of assignments will be posted as they are assigned.
- The exams will consist of multiple choice, fill-in-the-blank, and short essay questions. Exam (II) is not comprehensive. Make-up exams, if approved by the instructor, will be in the form of essays.
- No extra credit assignments are available.
- General grading criteria can be found in eLearning. Assignment specific grading criteria will be included with the assignment instructions.
- All assignments carry equal weight irrespective of the number of points assigned for a given assignment. Assignments will be scaled at the end of the semester when grades are calculated.
- **All assignments will be submitted via eLearning. I do *not* accept assignments via email. If you submit an incorrect assignment or need to resubmit your assignment in eLearning you will be allowed to resubmit as long as it is before the due date. Send me an email prior to the due date and I will clear your submission. Upon doing so, you will be able to resubmit.**

Grading

This course will feature a mix of activities and written and verbal assignments that may be in class or on campus. Homework will include readings from the text, assignments, and activities that usually require the student to complete some type of task. The instructor will provide detailed instructions as well as the grading criteria for each assignment. Please consult the course schedule for deadlines.

Grading Scheme

Grade Component	Percentage
Assignments	45%
Exams (1 and 2)	50%
Class Participation	5%
Total	100%

Scoring

Final Percentage Total	Letter Grade
>=92.5	A
>=87 and < 92.5	A-
>=83 and < 87	B+
>=79 and < 83	B
>=75 and < 79	B-
>=71 and < 75	C+
>=67 and < 71	C
>=63 and < 67	C-
>=59 and < 63	D+
>=55 and < 59	D
< 55	F

Course & Instructor Policies

eLearning will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Slides will be posted before class. Class announcements (e.g., change in assignment dates) will also be posted.

Instructor Response Policy: The instructor will respond to all student inquiries (emails, voice messages, etc.) within 48 hours (excluding holidays and weekends).

Attendance Policy/ Class Participation: Positive contributions to the class in terms of insightful comments or discussion (not just any relevant comment) in class at the appropriate times will be rewarded. Disruptive activities (using mobile phones in class, unnecessary talking with each other while the class is in progress, walking out of class abruptly while the class is in progress, walking into class late multiple times etc.) will be penalized. Barring these clearly positive and negative contributions to the class, one can expect to obtain 8 out of the 10 points meant for class participation. Attendance, by itself, is not directly given credit.

Late Work: All assignments are due at the beginning of class (not during and not after), on the specified date. I do not accept late assignments unless ***prior*** arrangements have been made with the instructor.

Academic Integrity: The University is committed to academic excellence and expects academic honesty from all members of the University community and believes that it is essential for academic excellence and integrity. Academic honesty includes adherence to guidelines established by the instructor in a particular course for both individual and group work. It prohibits representing the work of others to be one's own (plagiarism); receiving unauthorized aid on an assignment (cheating); and using similar papers or other work products to fulfill the obligations of different classes without the instructor's permission. Penalties for academic dishonesty may include a grade of "F" on the work in question or for the course. In addition, any student engaged in academic dishonesty will be subject to disciplinary action. Please refer to the General Polices website (see below) for detailed information pertaining to academic dishonesty, including procedures for determining disciplinary action.

WORKING TOGETHER on Individual Assignments: This course will have a considerable amount of computing work for application assignments. Each student, is expected to do their own work on the "individual" assignments. Copying another student's work (computer files) or having another person do your work is scholastic dishonesty and will be dealt with accordingly.

Makeup Exams: I do not give make-up exams unless a student presents convincing proof of conditions that prevent him/her from taking the exam at the scheduled time.

Lap-tops: The use of lap-tops will not be permitted during the class or during the exams, unless there is a group project that needs to be presented in the class.

General Policies & Procedures

For information regarding general University policies and procedures, please go to http://go.utdallas.edu/syllabus-policies. These policies include the following:

- Technical Support
- Field Trip Policies, Off-Campus Instruction and Course Activities
- Student Conduct and Discipline
- Academic Integrity
- Copyright Notice
- Email Use
- Withdrawal from Class
- Student Grievance Procedures
- Incomplete Grade Policy
- Disability Services
- Religious Holy Days
- Avoiding Plagiarism