CSE 4344/5344 Computer Networks

Spring 2020

Instructor: Dr. Sajib Datta, ERB 652
Office Hours: MoWe 1:00PM - 2:30PM or by appointment
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Website: http://crystal.uta.edu/~datta
Class hours: Sections: 5344-01: MoWe 4:00PM - 5:20PM - ERB 130
            Sections : 4344-02: MoWe 2:30PM - 3:50PM - ERB 130
Teaching Assistant: TBA

Course Description from Catalog:
Study of computer network architectures, protocols, and interfaces. The OSI reference model and the Internet architecture will be discussed. Networking techniques such as multiple access, packet/cell switching, and internetworking will be studied. Discussion will also include end-to-end protocols, congestion control, high-speed networking, and network management. Emphasis will be on Internet and ATM. Prerequisite: CSE 3320 or consent of instructor.

Course Objectives:
Computer networks from ISPs to WiFi and cellular networks are a key part of the information economy. These networks are the foundation for the Web, and they enable companies such as Google, Facebook and Amazon. This course introduces the fundamental problems of computer networking, from sending bits over wires to running distributed applications. For each problem, we explore the design strategies that have proven valuable in practice. Topics include error detection and correction, multiple-access, bandwidth allocation, routing, internetworking, reliability, quality of service, naming, content delivery, and security. As we cover these topics, you will learn how the internals of the Internet work to support the Web and other networked applications. You will develop a detailed understanding of widely-used networking technologies such as TCP/IP, HTTP, 802.11, Ethernet, and DNS.

Textbook:
Computer Networking: A Top-Down Approach (3rd edition or later), by James F. Kurose and Keith W. Ross

Attendance Policy:
Attendance is not required.

Grading Policy:
Quiz: 70%
Programming and Lab: 30%
Final grades are based on the standard ranges of A: 90–100, B: 80–89, C: 70–79, D: 60–69, F: 0–59.

Labs: Every lab assignment has a given due date. No late labs will be accepted without prior permission from the course instructor. (Five minutes late is still late.) Lab assignments will be posted on the class

website. Lab assignments must be **individual** effort. The Statement of Ethics you will receive details the definitions of collusion, plagiarism, and academic dishonesty as related to lab assignments in CSE.

Quizzes: Material covered on the quizzes will be based on the assigned chapters and class lectures. All quizzes are mandatory. There are NO make-up quizzes after the scheduled times. All quizzes will be kept by the instructor.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance.

American with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Electronic Communication Policy: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly.

Academic Integrity: At UT Arlington, academic dishonesty is completely unacceptable and will not be tolerated in any form, including (but not limited to) cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts (UT System Regents Rule 50101, 2.2). Suspected violations of academic integrity standards will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the students' suspension or expulsion from the University. Homework assignments are not group projects; each student is expected to write his or her own programs individually. Students should not be showing each other their code prior to the deadline for submission.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may contact the Maverick Resource Hotline by calling 817-272-6107, sending a message to resources@uta.edu, or visiting www.uta.edu/resources.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions on how to access the SFS system will be sent directly to students through MavMail approximately 10 days before the end of the term. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback data is required by state law; student participation in the SFS program is voluntary.

Tentative Class Calendar:

Week	Date	Topic
1	1/22/2020	Introduction to class
2	1/27/2020	Introduction to Computer Networks
2	1/29/2020	Introduction to Computer Networks
3	2/3/2020	Introduction to Computer Networks
3	2/5/2020	Introduction to Computer Networks
4	2/10/2020	Application Layer
4	2/12/2020	Application Layer
5	2/17/2020	Application Layer
5	2/19/2020	Application Layer
6	2/24/2020	Application Layer
6	2/26/2020	Application Layer
7	3/2/2020	Transport Layer
7	3/4/2020	Transport Layer
8	3/9/2020	Transport Layer
8	3/11/2020	Spring Break
9	3/16/2020	Spring Break
9	3/18/2020	Transport Layer (cont.)
10	3/23/2020	Transport Layer (cont.)
10	3/25/2020	Transport Layer (cont.)
11	3/30/2020	Transport Layer (cont.)
11	4/1/2020	Network Layer
12	4/6/2020	Network Layer
12	4/8/2020	Network Layer
13	4/13/2020	Network Layer
13	4/15/2020	Network Layer
14	4/20/2020	Network Layer
14	4/22/2020	Network Layer
15	4/27/2020	Link Layer
15	4/29/2020	Link Layer
16	5/4/2020	Link Layer
16	5/6/2020	Link Layer