San José State University Computer Science Department CS 158A, Computer Networks, Section 1, Spring 2017

Course and Contact Information

Instructor: Dr. Faramarz Mortezaie

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Office Hours: M 2:15 - 3:00 PM or by appointment

Class Days/Time: MW 7:30 - 8:45 AM

Classroom: MH 422

Prerequisite: CS 146 Data Structures and Algorithms and CS 147 Computer Architecture

with grade C- or better.

Catalog Description

Introduction to computer networks, including network layered architectures, local and wide area networks, mobile wireless networks, Internet TCP/IP protocol suite, network resource management, network programming, network performance, network security, network applications. Prerequisite: CS 146, and CS 147 or CMPE 120, (with grades of "C-" or better in each); or instructor consent.

Course Learning Objectives (CLO)

CLO1 Have an ability to know the concepts and principles underlying the structures and designs of computer networks.

CLO2. Have an ability to understand network layered architectures and their associated benefits.

CLO3. Have an ability to understand the Internet TCP/IP protocol suite.

CLO4. Have an ability to know basic network programming, performance and diagnostic tools.

Required Texts/Readings

Textbook

Computer Networks by Andrew Tanenbaum and David Wetherall, fifth Edition Prentice Hall/Pearson

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu/senate/docs/S12-3.pdf.

NOTE that University policy F69-24, "Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading."

Grading

Homework 20% (equally weighted)

Exam-1 25% Exam-2 25% Team Project 15%

Comprehensive Final Exam 15%

Grading policy: If you submit the assignment late:

1 day: 20% will be deducted
Up to one week: 30% will be deducted.
Up to 2 weeks: 40% will be deducted

Any work later than that or if solutions are posted will not be accepted.

Course Grading Standards

I first try scores of 90, 80, and 70 to cut off letter grades of A-, B-, and C-, respectively. If overall class performance is too low to use these cut offs, I set a cut off of C- to a lower score than the class total average but a higher score than 60 (this number may change), and divide the students' group above the cut off of C- into A+, A, A-, B+, B, B-, C+, C, C-. The rest of students will be given by a grade of D+, D, D-, F or WU depending on their class performance.

Note that "All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades." See <u>University Policy F13-1</u> at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.

Classroom Protocol

Students are expected to participate all the lectures. Please turn off your cell phones during the lecture time.

University Policies

University Policies Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/"

CS 158A / Computer Networks / Spring 2017, Course Schedule

The schedule is subject to change with fair notice announced in class.

| Week | Date | Topics | Reading Assignments and | Due Date |
|------|----------|-----------------------|-------------------------|----------|
| | | | homework | |
| 1 | 01/30/17 | | Chapter-1 | |
| | 02/01/17 | Physical Layer | Homework-1 | 2/8 |
| 2 | 02/06/17 | Physical Layer | Chapter-2 | 2/15 |
| | 02/08/17 | Physical Layer | Homework-2 | |
| 3 | 02/13/17 | Data Link Layer | Chapter-3 | |
| | 02/15/17 | Data Link Layer | Homework-2 | 2/22 |
| | | | | |
| 4 | 02/20/17 | Data Link Layer | Chapter-3 | |
| | 02/22/17 | Medium Access Control | 1 | |
| 5 | 02/27/17 | Medium Access Control | Chapter-4 | 3/7 |
| | 03/01/17 | Medium Access Control | Homework-4 | |
| 6 | 03/06/17 | Review | Chapter-4 | |
| | 03/08/17 | Exam-1 | _ | |
| 7 | 03/13/17 | Network Layer | Chapter-4 | 3/21 |
| | 03/15/17 | Network Layer | Homework-5 | |
| 8 | 03/20/17 | Network Layer | Chapter-5 | |
| | 03/22/17 | Transport Layer | Chapter-6 | |
| | | | Homework-6 | 4/4 |
| 9 | 03/27/17 | Spring Recess | | |
| | 03/29/17 | No Classes | | |
| 10 | 04/03/17 | Transport Layer | Chapter-7 | |
| | 04/05/17 | Transport Layer | Homework-7 | 4/11 |
| 11 | 04/10/17 | Application Layer | Chapter-8 | |
| | 04/12/17 | Application Layer | Homework-8 | 4/18 |
| | | | Chapters 4 to 8 | |
| 12 | 04/17/17 | Review | Chapters 4 to 8 | |
| | 04/19/17 | Exam-2 | Chapter-9 | |
| | | | | |
| 13 | 04/24/17 | Application Layer | Chapter-9 | |
| | 04/26/17 | Application Layer | Homework-9 | 5/2 |
| 14 | 05/01/17 | Network Security | Chapter-9 | |
| | 05/03/17 | Network Security | Chapter-10 | |
| 15 | 05/08/17 | Review | Chapter-10 | 5/16 |
| | 05/10/17 | Presentation | Homework-10 | |
| 16 | 05/15/17 | Presentation | | |
| | 05/17/17 | No classes | | |
| | 05/18/17 | Final Exam | Thursday 7:15 – 9:30 AM | |