

San José State University
Computer Science Department
CS 158-A, Computer Networks, Section 1, Fall 2019

Course and Contact Information

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| Instructor: | Harman Gill |
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| Office Hours: | T TH 1:15 PM – 1:45 PM |
| Class Days/Time: | T TH 12:00 PM – 1:15 PM |
| Classroom: | SCI 311 |
| Prerequisites: | CS 146 Data Structures and Algorithms and CS 147 Computer Architecture with grade C- or better. |

Course 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.

Canvas Course Site

Course materials such as syllabus, textbook, assignments, questions of the week and exams can be found on the [Canvas Learning Management System course website](http://sjsu.instructure.com) at <http://sjsu.instructure.com>. You are responsible for regularly checking with Canvas to learn of any updates.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. Have an ability to know the concepts and principles underlying the structures and designs of computer networks.
2. Have an ability to understand network layered architectures and their associated benefits.
3. Have an ability to understand the Internet TCP/IP protocol suite.
4. Have an ability to know 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 Information

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|------------------------------------|-----|
| Homework | 15% |
| Quiz | 15% |
| Midterm 1 | 20% |
| Midterm 2 | 20% |
| Final Exam | 20% |
| Class Participation and Attendance | 10% |

Determination of Grades

| Percentage | Grade |
|--------------|-------|
| 92 and above | A |
| 90-91 | A- |
| 88-89 | B+ |
| 82-87 | B |
| 80-81 | B- |
| 78-79 | C+ |
| 72-77 | C |
| 70-71 | C- |
| 60-69 | D |
| 59 and below | F |

No make-up Midterms/ Final Exam and no late assignments will be accepted.

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 [University Policy F13-1 at http://www.sjsu.edu/senate/docs/F13-1.pdf](http://www.sjsu.edu/senate/docs/F13-1.pdf) for more details.

Classroom Protocol

1. Students are expected to participate in all lectures. Attendance is crucial to do well on quiz, assignments, and exams.
2. Please turn off your cell phones during the lecture time.
3. Always start your email subject with “CS158A” to get my attention.
4. Cheating will result in ZERO score on assignment and exam, and will be reported to the department and university.

University Policies

Per [University Policy S16-9 \(http://www.sjsu.edu/senate/docs/S16-9.pdf\)](http://www.sjsu.edu/senate/docs/S16-9.pdf), relevant information to all courses, such as academic integrity, accommodations, dropping and adding, consent for recording of class, etc. is available on Office of Graduate and Undergraduate Programs’ [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>.

CS 158A / Computer Networks, Fall 2019, Course Schedule

This detailed outline is subject to change based on the needs of the class. Updates will be notified in the class and Canvas will be kept up to date.

Course Schedule

| Week | Date | Topics, Readings, Assignments, Deadlines |
|------|-------|---|
| 1 | 8/22 | Introduction to Computer Networks (Chapter 1) |
| 2 | 8/27 | Network Layering (Chapter 1) |
| 2 | 8/29 | Physical Layer (Chapter 2), Homework 1 posted |
| 3 | 9/3 | Quiz 1, Physical Layer (Chapter 2) |
| 3 | 9/5 | Link Layer (Chapter 3) |
| 4 | 9/10 | Data Link Layer and Medium Access Sub layer (Chapter 4), Homework 1 due |
| 4 | 9/12 | Medium Access Sub layer (Chapter 4), Homework 2 posted |
| 5 | 9/17 | Quiz 2, Medium Access Sub layer (Chapter 4) |
| 5 | 9/19 | Medium Access Sub layer (Chapter 4), Midterm 1 review |
| 6 | 9/24 | Midterm 1 |
| 6 | 9/26 | Network Layer (Chapter 5) |
| 7 | 10/1 | Network Layer (Chapter 5), Homework 2 due |
| 7 | 10/3 | Network Layer (Chapter 5), Homework 3 posted |
| 8 | 10/8 | Quiz 3, Network Layer (Chapter 5), Transport Layer (Chapter 6) |
| 8 | 10/10 | Transport Layer (Chapter 6) |
| 9 | 10/15 | Transport Layer (Chapter 6) |
| 9 | 10/17 | Transport Layer (Chapter 6), Homework 4 posted (Homework 3 due) |
| 10 | 10/22 | Quiz 4, Transport Layer (Chapter 6) |
| 10 | 10/24 | Transport Layer (Chapter 6), Midterm 2 review |
| 11 | 10/29 | Midterm 2 |
| 11 | 10/31 | Transport Layer (Chapter 6), Quality of Service |
| 12 | 11/5 | Quality of Service, Application Layer (Chapter 7) |
| 12 | 11/7 | Application Layer (Chapter 7), Homework 5 posted (Homework 4 due) |
| 13 | 11/12 | Quiz 5, Application Layer (Chapter 7) |
| 13 | 11/14 | Application Layer (Chapter 7) |

| Week | Date | Topics, Readings, Assignments, Deadlines |
|-------------------|-------------|---|
| 14 | 11/19 | Application Layer (Chapter 7), Network Security (Chapter 8) |
| 14 | 11/21 | Network Security (Chapter 8) |
| 15 | 11/26 | Network Security (Chapter 8), Homework 5 due |
| 16 | 12/3 | Quiz 6 , Network Security (Chapter 8) |
| 16 | 12/5 | Final Review |
| Final Exam | 12/10 | SCI 311 and 12:00 PM |
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