SJSU SAN JOSÉ STATE UNIVERSITY

College of Science · Computer Science

Computer Networks Section 80

CS 158A

Fall 2023 3 Unit(s) 08/21/2023 to 12/06/2023 Modified 08/19/2023

Contact Information

Instructor: Paul Tuan Nguyen

Email: paul.t.nguyen02@sjsu.edu

Office Hours: by appointment

Course Description and Requisites

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(s): CS 146 and CS 47 (with a grade of "C-" or better). Computer Science or Software Engineering majors only, or instructor consent.

Letter Graded

Classroom Protocols

1. Students are strongly recommended to participate in all lectures and activities
2. Always start your email subject with “CS158A” to get my attention

Program Information

Diversity Statement - At SJSU, it is important to create a safe learning environment where we can explore, learn, and grow together. We strive to build a diverse, equitable, inclusive culture that values, encourages, and supports students from all backgrounds and experiences.

Course Goals

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

Course Learning Outcomes (CLOs)

1. Have the ability to know the concepts and principles underlying the structures and designs of computer
2. Have the ability to understand network layered architectures and their associated
3. Have the ability to understand the Internet TCP/IP protocol
4. Have the ability to know network programming, performance, and diagnostic
5. Have the ability to configure a basic computer network

Course Materials

Recommend Materials:

https://www.cengage.com/c/ccna-guide-to-cisco-networking-fundamentals-4e-cannon-caudle-chiarella/9781418837051/

Cisco Network Academy

Grading Information

Percentage	Grade
>98	A+
92-97	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

Labs: 50%

Midterm: 20%

Final: 30%

University Policies

Per University Policy S16-9 (PDF) (http://www.sjsu.edu/senate/docs/S16-9.pdf), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on the Syllabus Information

(https://www.sjsu.edu/curriculum/courses/syllabus-info.php) web page. Make sure to visit this page to review and be aware of these university policies and resources.

Course Schedule

Week	Date	Topics	Assignments	Due Date	
1	8/21/2023	Introduction and Module 1 (Networking Today & OSI Layers)			
2	8/28/2023	Module 2: Basic switch and device configuration. Module 3: Protocol models	1. Research Networking Standard (3.4.4). 2. 3.5.5: TCP-IP OSI model	4-Sep	
3	9/4/2023	No class on Monday & Module 4: Physical Layer			
4	9/11/2023	Module 5: Number System	1. View Network Traffic (3.7.10) 2. 4.7.2 PT	15-Sep	
5	9/18/2023	Module 6: Data Link Layer Module 7: Ethernet Switching			
6	9/25/2023	Module 8: Network Layer Module 9: Address Resolution	1. View switch MAC address (7.3.7) 2. 4.7.2 PT	2-Oct	
7	10/2/2023	Mid Term Special Topic: Routing Protocols			
8	10/9/2023	Special Topic: Routing Protocols			
9	10/16/2023	Module 10: Basic Configuration Module 11: IPv4 Addressing	1. Calculate IPv4 address (11.6.6) 2. 11.5.5 PT	22-Oct	
10	10/23/2023	Module 12: IPv6 addressing			
11	10/30/2023	Module 13 ICMP			
12	11/6/2023	Module 14: Transport Layer			
13	11/13/2023	Module 15: Application Layer Module 16: Network Security	1. PT 13.2.7	20-Nov	
14	11/20/2023	Thanks Giving Week			

15	11/27/2023	Review Week			
16	12/4/2023	Final Week			