CS 485/585, ECE 440 Computer Networking (Online)

Fall, 2020

Instructor information
Name: Omar Aaziz — E-mail: oaaziz@unm.edu
Class Hours: MWF 10:00 am - 10:50 am — Online
Office Hours: W/Th 8 am - 9:00 am — Online

TA information
Name: TBD — E-mail: TBD
Office Hours:TBD

Course Description

The Internet became the most way for people to communicate; it is interesting to learn how this vast network works! In this course, we will emphasize the design and administration of local area networks (LANs). You will learn about computer network implementation, understand the theoretical knowledge of data computer networks and communications. The course provides a rich understanding of different network design approaches and their operations. The course includes several topics that show you how to go from simple bits on a wire to the complex protocols that allow us to use advanced web-based applications.

Required Materials

- Computer Networking, A Top-Down Approach (7th Edition) by Kurose and Ross

Prerequisites/Corequisites

There are no formal prerequisites, although you should have some basic computer science background and experience with computer programming. If you have taken a class such as CS 341 (Computer Architecture and Organization), you should be fine.

Online Learning

The class will be 100% online! We will use Zoom video communications to meet on the regular class times, so make sure you download the application and use the following meeting ID and password.

Meeting ID: 962 2917 0130
Passcode: CSisFun

Zoom Meeting Notes

- Sign-in to the class meeting using your UNM Zoom account
- Test your device microphone and camera before the class starts
- Make sure you have good internet connection
- Change your Zoom account perdonal name to First and Last name
- Turn off your microphone during class and use Rise Hand feature to request talking
- The class will not be recorded, and individual recording is not permitted
- The above Zoom meeting ID and password are for this course only and you are not allowed to share this information with other people

Grading Policy

There will be group lab assignments in-class online quizzes and two exams. We will have 11 quizzes and only best ten counts toward your grade. They will be given randomly throughout the semester, so attendance is critical.

Labs	50%
Exam 1	15%
Exam 2	25%
Quizzes	10%

Letter grades will be calculated as follows: 59 and below is an F, 60-62 is a D-, 63-66 is a D, 67-69 is a D+, 70-72 is a C-, 73-76 is a C, 77-79 is a C+, 80-82 is a B-, 83-86 is a B, 87-89 is a B+, 90-92 is an A-, 93-98 is an A, and 99-100 is an A+.

Schedule and weekly learning goals

The schedule is tentative and subject to change. The learning goals below should be viewed as the key concepts you should grasp after each week, and also as a study guide before each exam, and at the end of the semester. Each exam will test on the material that was taught up until 1 week prior to the exam. The applications in the second half of the semester tend to build on the concepts in the first half of the semester though, so it is still important to at least review those concepts throughout the semester.

Week	Details
week 1	Course introduction, Internet, network edge, Network core, and Network performance
week 2	Protocol layers, service models C/Java programming review
week 3	Discuss Lab 1 Introduction to Application layer services (Sockets, DNS)
week 4	Socket programming with UDP and TCP
week 5	Introduction to Transport layer services Principles of reliable data transfer
week 6	Principles of congestion control Exam 1 review
week 7	Exam 1 Discuss Lab 2
week 8	Network layer services
week 9	Exam 1 grades and review Routing algorithms
week 10	Introduction to routing (Broadcast and multicast routing) Discuss Lab 3
week 11	Introduction to Link layer services Multiple access protocols
week 12	Data center networking Network monitoring
week 13	Network congestion Discuss Lab 4
week 14	Network simulators Introduction to network security
week 15	Securing TCP connections: SSL Thanksgiving
week 16	Operational security: firewalls and IDS Exam 2 review
week 17	Final Exam

Important Dates

- Classes begin August 17
- Last day to DROP without "W" grade and 100% tuition refund, September 4
- Last Day to Drop without Dean's Permission November 6
- Labor Day September 7
- Wednesday Break Day October 7
- Tuesday Break Day November 3
- Thanksgiving Holiday November 26 - 27
- Final Exam December 7-11

Communicating with me

I will not be available during day time, I will reply to emails and requests in 24 hours.

Accommodation

In accordance with University Policy 2310 and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that you take the initiative to bring such needs to the instructor's attention, as he/she are not legally permitted to inquire. Students who may require assistance in emergency evacuations should contact the instructor as to the most appropriate procedures to follow. Contact Accessibility Resource Center at 277-3506 for additional information.

Academic Integrity

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.