

CSI 470 - Computer Networks

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Office Hours: DUNN N102 M 3:30-4:20, W 2:30-3:20
and T 1:00-2:15

Overview: Networks have become an integral part of computing and computer science. From cell phones to laptops to your traditional desktop, it is rare to be without network connectivity at your fingertips. The course will cover the basics of each layer in networks from building applications with socket programming to routing algorithms and subnetting to the link layer, error detection and CRCs.

Advising: CSI 470 is an elective in computer science. CSI 240 and CSI 250 are prerequisites.

Exams: Tentative exam dates are: 2/12, 3/19, and 4/16. The final exam will be administered during its scheduled slot during final exam week. An absence on the day of the exam will result in a grade of 0. Except in cases of very extreme emergency, exams must be taken on the day the exam is given. Before a make-up test is scheduled, documentation of the extreme emergency must be given. Make-up exams for tests missed due to an extreme emergency will be arranged for a time that is mutually convenient for the student and Dr. Ramsey.

Attendance: Attendance is mandatory in this course. On your seventh absence, you automatically fail the course. As a matter of courtesy, you are expected to notify Dr. Ramsey before class describing the reason of your absence. You must be present on the day of an exam or you will receive a 0.

There is no distinction between excused and unexcused absences. It is quite likely that I will email you to discuss the reasons you have missed the class, but it is ultimately your duty to keep track of your absences and to contact me. Missing a class may result in missed classwork and/or quizzes. There are no make-up quizzes or classwork. It is your responsibility to obtain assigned homework, announcements and class notes from a classmate.

Grading: Each exam (and the final) is worth 20% of your final grade. Homework, classwork and quizzes are worth the last 20% of your grade. Programming assignments must be handed in on time and compile. Late homework (and programming that does not compile) will receive a grade of 0. Homework is due by the beginning of class on the day it is due. Do not 'touch' or modify your files on the server after handing in the assignment as this will change the time stamp. If you miss an assignment, you should always make up the work for consideration, review and mark up.

Academic Honesty: You are always subject to the Honor Code of Washington College. Always sign the honor code on materials that you hand in to me. All work must be your own.

Accommodations: If you have an accommodation that has been reported to the college, please let me know as soon as possible so I can work to meet your accommodation.

Suggestions: Get into a group. You may point out programming errors and discuss design with others, but all code must be of your own creation. Copying another students code will result in immediate failure of the course. Visit the math center and course mentor! There are lots of resources.

Rough Outline

Week 1	Network Applications
Week 2	Telnet, FTP, DNS, SMTP
Week 3	Peer to Peer
Week 4	Socket Programming and Exam 1
Week 5	Transport Layer
Week 6	Reliable Data Transfer
Week 7	TCP and UDP
SPRING	BREAK
Week 8	Congestion Control and Exam 2
Week 9	Forwarding and Routing
Week 10	Datagrams and Internet Protocol (IP)
Week 11	Routing Algorithms
Week 12	Link Layer and Exam 3
Week 13	Error Detection / Correction
Week 14	LANs and ARP, ethernet, PPP