

CS 372 Introduction to Computer Networks

Course Calendar Fall 2021

Notes: Weeks are shown Monday through Sunday, Assignments are due Sunday nights, unless otherwise noted, schedule tentative

New Assignments in **BLACK**. Due Assignments in **RED**

Module	Topics
#0: Before week 1	Get familiar, look ahead
#1: 27 September – 03 October Syllabus Quiz Module 1 Summary Exercises Discussion: Introduce Yourself Lab #1 Syllabus Quiz Module 1 Summary Exercises Discussion: Self Intro, Video due Friday	Basic concepts Networking metrics Network protocols Network edge/core Circuit-switching / Packet-switching Read K&R Chapter 1.1 – 1.4
#2: 04 October – 10 October Module 2 Summary Exercises Project #1 Module 2 Summary Exercises Lab #1	Physical media Layering models Security issues Application layer Read K&R Chapter 1.5 – 1.8, 2.1
#3: 11 October – 17 October Module 3 Summary Exercises Lab #2 Module 3 Summary Exercises Project #1	Application layer protocols: • Hypertext Transfer Protocol (HTTP) • File Transfer Protocol (FTP) • Mail (SMTP, POP3, IMAP) • Domain Name Services (DNS) Network byte order Read K&R Chapter 2.2 – 2.4, 2.7 (2.6 optional)
#4: 18 October – 24 October Module 4 Summary Exercises Project #2 Module 4 Summary Exercises Lab #2	Transport Layer • Introduction • Multiplexing/Demultiplexing Socket programming primer Transport Layer • Connectionless transport • Connection-oriented transport • Reliable Data Transfer Read K&R Chapter 3.1 – 3.3, 3.5.4

#5: 25 October – 31 October Module 5 Summary Exercises Lab #3 Discussion: Modules 1-5, Video Demo #1 Module 5 Summary Exercises Lab #3 Discussion: Modules 1-5, Video Demo #1 due Friday	Transport Layer • Transmission Control Protocol (TCP) • User Datagram Protocol (UDP) • Flow control • Sliding window Read K&R Chapter 3.4 – 3.5 (Re-read 3.5.4)
Midterm: 01 November – 07 November Midterm Exam Dates	Midterm Exam (covers weeks 1-5)
#6: 01 November – 07 November Module 6 Summary Exercises Module 6 Summary Exercises	Transport Layer • Congestion control • TCP Connections Setup & Teardown • TCP Fairness Read K&R Chapter 3.6 – 3.8
#7: 08 November – 14 November Module 7 Summary Exercises Lab #4 Module 7 Summary Exercises	Network Layer • Introduction • Internet protocols • Datagram Routing & Forwarding • Internet Protocol (IPv4) Header • Routing vs. Forwarding • Classless Inter-Domain Routing (CIDR) • Dynamic Host Configuration Protocol (DHCP) Read K&R Chapter 4.1 – 4.3
#8: 15 November – 21 November Module 8 Summary Exercises Module 8 Summary Exercises Lab #4	Network Layer • Routing algorithms • Fragmentation • Internet Control Message Protocol (ICMP) • Network Address Translation (NAT, NAPT) Read K&R Chapter 5.1 – 5.3, 5.6
#9: 22 November – 28 November Module 9 Summary Exercises Lab #5 Project #4 Module 9 Summary Exercises	Network Layer • Internet Protocol (Ipv6) Link Layer • Network interfaces • Multiple Access protocols • MAC addresses • Address Resolution Protocol (ARP) • Local Area Networks (LAN) ○ Ethernet Read K&R Chapter 6.1 – 6.4, 6.7
#10: 29 November – 05 December Module 10 Summary Exercises Discussion: Modules 6-10, Video Demo #2	Link Layer • Ethernet Frame and Multiple Access • Wireless networks

Discussion: Modules 6-10, Video Demo #2 due FRIDAY Lab #5 due FRIDAY Module 10 Summary Exercises Project #4	- Networking Mobility - Network security - Cryptography Read K&R Chapter 7.1 – 7.3, 8.1 – 8.3
Final: 01 December – 07 December Final Exam	Final Exam (covers weeks 6-10) (Available through Tuesday of finals week)