

CS 372 Introduction to Computer Networks

Course Calendar* Summer 2020

NOTE: Weeks are shown Sunday through Sunday. Assignments are due each Sunday, unless otherwise noted.

***NOTE:** Subject to change based on material pace

New Assignments in BLACK. Due Assignments in RED

Module	Topics
#1: 06/21 – 06/28 Module 1 Summary Exercises Discussion: Introduce Yourself Syllabus Quiz Lab #1 Module 1 Summary Exercises Syllabus Quiz Discussion: Introduce Yourself	• Basic concepts • Networking metrics • Network protocols • Network edge/core • Circuit-switching / Packet-switching Read K&R Chapter 1.1 – 1.4
#2: 06/21 – 06/28 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: 06/28 – 07/05 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: 06/28 – 07/05 Module 4 Summary Exercises 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

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#5: 07/05 – 07/12 Module 5 Summary Exercises Lab #3 Discussion: Modules 1-5, Video Demo #1 Project #3 (no project 2 summer 2020) Module 5 Summary Exercises Lab #3	• 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: 07/12 – 07/19 Discussion: Modules 1-5, Video Demo #1 due Friday Project #3 (no project 2 summer 2020) Midterm Exam Dates: 07/13 – 07/19	• Midterm Exam (Available Monday – Sunday only)
#6: 07/19 – 07/26 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: 07/19 – 07/26 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 • Network Layer ○ Classless Inter-Domain Routing (CIDR) ○ Dynamic Host Configuration Protocol (DHCP) Read K&R Chapter 4.1 – 4.3
#8: 07/26 – 08/02 Module 8 Summary Exercises Project #4	• Network Layer ○ Routing algorithms ○ Fragmentation ○ Internet Control Message Protocol (ICMP) ○ Network Address Translation (NAT, NAPT)

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Module 8 Summary Exercises Lab #4	Read K&R Chapter 5.1 – 5.3, 5.6
#9: 07/26 – 08/02 Module 9 Summary Exercises Lab #5 Module 9 Summary Exercises Project #4	• 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: 08/02 – 08/09 Module 10 Summary Exercises Discussion: Modules 6-10, Video Demo #2 Discussion: Modules 6-10, Video Demo #2 due FRIDAY Lab #5 due FRIDAY Module 10 Summary Exercises	• Link Layer ◦ Ethernet Frame and Multiple Access ◦ Wireless networks ◦ Networking Mobility • Network security • Cryptography Read K&R Chapter 7.1 – 7.3, 8.1 – 8.3
Final Final Exam Dates: 08/09 – 08/12	Final Exam (Available Sunday – Wednesday only)