

# CS/ECE 372 Introduction to Computer Networks

## Course Calendar\* Fall 2019

**NOTE:** Weeks are shown Sunday through Sunday. Assignments are due the 2<sup>nd</sup> Sunday, unless otherwise noted.

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

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

Unit / Week	Topics
<b>#1:</b> 09/29 – 10/06  <b>Week 1 Summary Exercises</b> <b>Lab #1</b>  <b>Week 1 Summary Exercises</b>	<ul style="list-style-type: none"> <li>• Basic concepts</li> <li>• Networking metrics</li> <li>• Network protocols</li> <li>• Network edge/core</li> <li>• Circuit-switching / Packet-switching</li> </ul> <b>Read K&amp;R Chapter 1.1 – 1.4</b>
<b>#2:</b> 10/06 – 10/13  <b>Week 2 Summary Exercises</b>  <b>Week 2 Summary Exercises</b> <b>Lab #1</b>	<ul style="list-style-type: none"> <li>• Physical media</li> <li>• Layering models</li> <li>• Security issues</li> <li>• Application layer</li> </ul> <b>Read K&amp;R Chapter 1.5 – 1.8, 2.1</b>
<b>#3:</b> 10/13 – 10/20  <b>Week 3 Summary Exercises</b> <b>Lab #2</b>  <b>Week 3 Summary Exercises</b>	<ul style="list-style-type: none"> <li>• Application Layer Protocols <ul style="list-style-type: none"> <li>◦ Network byte order</li> <li>◦ Hypertext Transfer Protocol (HTTP)</li> <li>◦ File Transfer Protocol (FTP)</li> <li>◦ Mail (SMTP, POP3, IMAP)</li> <li>◦ Domain Name Services (DNS)</li> </ul> </li> </ul> <b>Read K&amp;R Chapter 2.2 – 2.4, 2.7 (2.6 optional)</b>
<b>#4:</b> 10/20 – 10/27  <b>Week 4 Summary Exercises</b>  <b>Week 4 Summary Exercises</b>  <b>Lab #2</b>	<ul style="list-style-type: none"> <li>• Transport Layer</li> <li>• Socket Programming</li> <li>• Multiplexing / Demultiplexing</li> <li>• Connectionless &amp; Connection-Oriented Transport</li> <li>• User Datagram Protocol (UDP)</li> <li>• Reliable Data Transfer</li> </ul> <b>Read K&amp;R Chapter 3.1 – 3.3</b>

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<p><b>#5:</b> 10/27 – 11/03</p> <p><b>Week 5 Summary Exercises</b> <b>Lab #3</b></p> <p><b>Week 5 Summary Exercises</b></p>	<ul style="list-style-type: none"> <li>• Reliable Data Transfer</li> <li>• Transmission Control Protocol (TCP)</li> <li>• Flow Control</li> </ul> <p><b>Read K&amp;R Chapter 3.4 – 3.5 (Re-read 3.5.4)</b></p>
<p><b>#6:</b> 11/03 – 11/10</p> <p><b>Week 6 Summary Exercises</b></p> <p><b>Week 6 Summary Exercises</b> <b>Midterm Exam</b> <b>Lab #3</b></p>	<ul style="list-style-type: none"> <li>• Congestion Control</li> <li>• Fairness</li> <li>• TCP Connection Management</li> </ul> <p><b>Midterm Exam: 11/8 in-class</b></p> <p><b>Read K&amp;R Chapter 3.6 – 3.8</b></p>
<p><b>#7:</b> 11/10 – 11/17</p> <p><b>Week 7 Summary Exercises</b> <b>Lab #4</b></p> <p><b>Week 7 Summary Exercises</b></p>	<ul style="list-style-type: none"> <li>• Virtual circuits</li> <li>• Internet protocols</li> <li>• Datagram routing</li> <li>• Internet Protocol (IPv4)</li> <li>• Classless Inter-Domain Routing (CIDR)</li> <li>• Dynamic Host Configuration Protocol (DHCP)</li> </ul> <p><b>Read K&amp;R Chapter 4.1 – 4.3</b></p>
<p><b>#8:</b> 11/17 – 11/24</p> <p><b>Week 8 Summary Exercises</b></p> <p><b>Week 8 Summary Exercises</b> <b>Lab #4 due</b></p>	<ul style="list-style-type: none"> <li>• Routing algorithms</li> <li>• Fragmentation</li> <li>• Internet Control Message Protocol (ICMP)</li> <li>• Network Address Translation (NAT, NAPT)</li> </ul> <p><b>Read K&amp;R Chapter 5.1 – 5.3, 5.6</b></p>

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<p>#9: 11/24 – 12/01</p> <p><b>Week 9 Summary Exercises</b></p> <p><b>Week 9 Summary Exercises</b></p> <p><b>Lab #5</b></p>	<ul style="list-style-type: none"> <li>• Internet Protocol (IPv6)</li> <li>• Link Layer <ul style="list-style-type: none"> <li>◦ Network interfaces</li> <li>◦ Multiple Access protocols</li> <li>◦ MAC addresses</li> <li>◦ Address Resolution Protocol (ARP)</li> <li>◦ Local Area Networks (LAN)</li> <li>◦ Ethernet</li> </ul> </li> </ul> <p><b>Read K&amp;R Chapter 6.1 – 6.4, 6.7</b></p>
<p>#10: 12/01 – 12/08</p> <p><b>Week 10 Summary Exercises</b></p> <p><b>Week 10 Summary Exercises</b></p> <p><b>Lab #5 due FRIDAY</b></p>	<ul style="list-style-type: none"> <li>• Local Area Networks (LAN) <ul style="list-style-type: none"> <li>◦ Ethernet</li> </ul> </li> <li>• Wireless &amp; Mobile Networks</li> <li>• Network Security</li> </ul> <p><b>Read K&amp;R Chapter 7.1 – 7.3, 8.1 – 8.3</b></p>
<p>#8: 12/08 – 12/15</p> <p><b>Final Exam Dates:</b></p>	<ul style="list-style-type: none"> <li>• <b>Final Exam (tbd)</b></li> </ul>