TCOM 535 TCP/IP Suite Internet Protocol (3.0)

Instructor   Dr. Qiang Lin

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Time and Place Monday 7:20 PM – 10:00 PM, Nguyen Engineering Building 1109 or online synchronously.

Each lecture will be broadcasted using GMU Blackboard and recorded for later access.

Office Hours   Before class or by appointment.

Required Textbooks:

1. D. E. Comer, *Internetworking with TCP/IP*, 6th, New Jersey: Prentice-Hall.
2. M. Lin and Q. Lin, *Internet of Things Ecosystem: 2nd Edition*, Amazon.com, https://www.amazon.com/dp/B08TBGGM1G/ref=sr_1_3?dchild=1&keywords=internet+of+things+ecosystem&qid=1611066098&sr=8-3. *3rd Edition is coming in a week.*

Slides
At mymason.gmu.edu.

Homework
Will be assigned every Monday and is due the following week's class unless specified differently. Although the homework can be turned in later time without penalty if the student gets my permission, there will be 20% penalty on turning in more than THREE homeworks on the final exam date.

Exams
There will be one midterm exam and one final exam for this course. Both exams will be open book and open notes. The mid-term exam will cover the contents taught before the mid-term exam. The final exam will cover the contents taught after the mid-term exam and before the final exam. The precise dates for the exams will be listed below. Both midterm and final exam will be online only. Please watch detailed announcements for the exams.

Final Grade
The final grade will be determined from the combined scores of homework, midterm exam and final exam as follows:

- Homework 10%
- Midterm Exam 45% - online/take home
- Final Exam 45% - online/take home

Course Outline

Jan 24, Monday: Overview, Concept, Protocol Layer and Internet Address. Reading: Chapters 2, 3, 4 and 5

Jan 31, Monday: ARP, Datagram Delivery and Forwarding IP Datagram. Reading: Chapters 6, 7 and 8

Feb 7,   Monday: CIDR and ICMP. Reading: Chapters 5 and 9

Feb 14, Monday: UDP and TCP. Reading: Chapters 10 and 11

Feb 21, Monday: Routing Architecture, BGP, RIP and OSPF. Reading: Chapters 12, 13 and 14

Feb 28, Monday: Multicasting, Switching, MPLS and Mobile IP. Reading: Chapters 15, 16 and 18

Mar 7,   Monday: **Midterm Exam**

Mar 21, Monday: NAT, VPN, Client-Server Model, Socket and DHCP. Reading: Chapters 19, 20, 21 and 22

Mar 28, Monday: DNS, Email and WWW Reading: Chapters 23 to 25

Apr 4,   Monday: Multimedia, SNMP and Security. Reading: Chapters 26, 27 and 29

Apr 11, Monday: Cloud/Edge/Mist Computing and 5G. Reading: *Internet of Things Ecosystem: 3rd Edition*

Apr 18, Monday: Internet of Things - 1. Reading: *Internet of Things Ecosystem: 2nd Edition*

Apr 25, Monday: Internet of Things - 2. Reading: *Internet of Things Ecosystem: 2nd Edition*

May 16, Monday: **Final Exam**