ECE 542 SPRING 2016

COMPUTER NETWORK ARCHITECTURES AND PROTOCOLS

Instructor: Shih-Chun Chang

Office: Engineering 3234

Office Hours: 4:30 – 5:30 PM   MW

Phone: 703 993 1617

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Classroom: Engineering 1110

Time: 7:20 - 10 PM   Thursday

Textbooks (required)


References


Prerequisite: STAT 346: Probability for Engineers

Course Outlines

1. Overview
2. Architectures and Applications
3. Data Link Controls
4. Queueing Analysis
5. Multiplexing
6. MAC and LAN
7. Routing and Switching
8. High-Speed Network
9. TCP/IP
10. Network Security
Grading (GMU HONOR CODE is strictly enforced.)

1. HW 5% (no overdue)
2. Test 1: 3/3 30%
3. Test 2: 4/7 30%
4. Final: 5/5 35%

Weekly Schedule

1. 1/21 Layered Architectures
2. 1/28 Application Protocols
3. 2/4 PPP and Data Link Protocols
4. 2/11 CRC and ARQ Error Controls
5. 2/18 Queueing Model – Delay and Throughput Analysis
6. 2/25 MAC, Ethernet, and IEEE 802 standards
7. 3/3 Test 1
8. 3/10 Spring Break (No class)
9. 3/17 Wireless LAN, Bridge, and Spanning Tree Algorithm
10. 3/24 Routing and Switching
11. 3/31 SONET and High Speed Network
12. 4/7 Test 2
13. 4/14 TCP/IP Protocols
14. 4/21 Network Securities, Cryptography, and HTTPS
15. 4/28 Digital Signature, PGP, and Kerberos
16. 5/5 Final Examination