ECE 542  Spring 2010

COMPUTER NETWORK ARCHITECTURES AND PROTOCOLS

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Office Hours                       3:00-5:00 PM    Tuesday
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Classroom                          King Hall 2053
Time                                7:20-10:00 PM Tuesday
Prerequisite                        STAT 346: Probability for Engineer

Course Outlines:

1.Overview: Sections 1.1,1.2
2.Architectures and Applications: Sections 2.1-2.3
3.Data Link Controls: Sections 5.1-5.6; 3.9 (pp.173-178)
4.Queueing Analysis: Appendix A (pp.840-855)
5.Multiplexing: Sections 4.1,4.2 ; 5.7 (pp.340-348)
6.MAC and LAN: Sections 6.1-6.3; 6.6-6.10; 6.11(pp.465-467)
7.Routing and Switching: Sections 7.1-7.5
8.ATM: Sections 7.6; 7.8 (pp.549-556); 9.1-9.4
9.TCP/IP: Sections 8.1-8.5
**Grading:**

1. HW 10%
2. Test 1: 3/2 25%
3. Test 2: 4/6 25%
4. Final : 5/11 40%

**Weekly Schedule:**

1. 1/19  Overview and Layered Architectures
2. 1/26  Applications, SMTP, HTTP, and DNS Protocols
3. 2/2  Link Controls, PPP and HDLC Protocols
4. 2/9  ARQ and CRC Error Controls
5. 2/16  Queueing Models: M/M/1, M/D/1; Delay Analysis
6. 2/23  Multiplexing, SONET, and M/M/1/K Queue
7. 3/2  Test 1
8. 3/9  Spring Break
9. 3/16  MAC, ALOHA, Ethernet, and IEEE 802 LAN Protocols
10. 3/23  IEEE 802.11 Wireless LANs
11. 3/30  Routing Algorithms, and ATM Networks
12. 4/6  Test 2
13. 4/13  ATM Traffic Managements, Leaky Bucket Algorithm)
14. 4/20  TCP/IP Protocols
15. 4/27  Network Security
16. 5/4  Reading Day (No Class)
17. 5/11  Final Examination