CIS 544
Network Design and Implementation
Fall 2011
Tuesday – Thursday

Textbook:
Data and Computer Communications, 9/E
William Stallings
ISBN-10: 0131392050
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Publisher: Prentice Hall

Course Objective and Overview:
This course is designed to give students an understanding of network design concepts. The course will focus on the Layers 3-7 of the OSI Model. The course will introduce students to a variety of networking topics such as data transmission methods, multiplexing, Wide Area Networks (WANS), switching methods, cellular networks, Local Area Networks (LANS), Ethernet, Wireless LANs, and Internet Protocols including IPv6.

The final course grade will be computed from the following inputs:

Exam 1	**20%**
Exam 2	**20%**
Final Exam	**20%**
Term Paper	**20%**
Homework	**20%**
Class Participation	**10%**

TOTAL	**100%**

The final course grade will be determined as follows:

90 or above	A
80-89.99	B
70-79.99	C
60-69.99	D
Less than 60%	F

Tentative Course Schedule

Date

W1
Module 1 - Data Communications, Data Networking, and the Internet

W2
Module 2 - Protocol Architecture, TCP/IP, and Internet-Based Applications
Module 3 - Data Transmission

W3
Module 4 - Digital Data Communication Techniques
Module 5 - Multiplexing

W4
Module 6 Circuit Switching and Packet Switching
Module 7 Asynchronous Transfer Mode

W5
Module 8 Routing in Switched Networks
Module 9 Congestion Control in Data Networks
W6
Module 10 Cellular Wireless Networks

W7
Module 11 Local Area Networks
Module 12 Ethernet

W8
Module 13 Wireless LANs

W9
Module 14 Internetwork Protocols

W10
Module 15 Internetwork Operation

W11
Module 16 Quality of Service