

CS 761: Data Communications (3 Credits)

September 2003 – January 2004

Course Description

This course will discuss about both data communications and computer networks. At first, basic concepts of signals, OSI model, encoding and modulating, transmission media and impairment are explored. Then, Local Area Network, especially Ethernet, Wide Area Network (WAN), ISDN, X.25, Frame Relay, and ATM are discussed. Finally, the course will concentrate on computer networks. The main discussions are TCP/IP related topics, such as IP addressing, TCP and UDP, ICMP, and ARP. Basic routing concepts, and network applications are also presented.

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Office Hours: after class or by appointment

Class Schedule and Location

Time: Saturday: 9:00 – 12:00
Location: TU

Text Book

“Data Communications and Networking”, 2nd Edition (3rd Edition), Behrouz A. Forouzan, Mc Graw-Hill, ISBN: 0-07-118160-1

Data & Computer Communications, 6th Edition, Williams Stallings, Prentice Hall, 2000

Grades

Midterm: 40 %
Final: 40 %
Assignment: 20 %

Course Policies

1. Your grade is based on the overall class performance. However, the cumulative score below 50% is considered as fail (F).
2. Make-up exam will be provided only for restrict circumstances, such as severe illness.
3. An “F” grade will be given to any form of cheating.

Tentative Course Outline

Week 1: Introduction + Basic concepts
Week 2: OSI model + Signals
Week 3: Encoding and Modulating
Week 4: Transmission and Transmission Media
Week 5: Multiplexing + Error detection and correction
Week 6: Data link control and protocols
Week 7: Midterm Exam
Week 8: LAN + Ethernet
Week 9: WAN + Switching + ISDN
Week 10 X.25 + Frame Relay + ATM
Week 11: Networking and internetworking devices
Week 12: TCP/IP Introduction + IP addressing and protocol
Week 13: TCP + UDP + ARP + ICMP
Week 14: Final Exam