

# EE384

H.O. #1

Winter 98-99

# Network Protocols and Standards

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- Instructor: Professor *Ciro Noronha*
  - Office: TBD
  - Telephone: TBD
  - E-mail: TBD
  - Office hours: Tu, Th 9:15-10:15 AM
- Teaching Assistant: *Benjamin Chen*
  - E-mail: *benchen@leland*
  - Telephone: TBD
  - Office & Office hours: TBD

# Course Work

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- Tentative grade distribution:
  - Homework assignments: 40%
  - Midterm: 25%
  - Final: 35%

# Suggested Reference Textbooks

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- Radia Perlman, *Interconnections: Bridges and Routers*, Addison-Wesley
- Christian Huitema, *Routing in the Internet*, Prentice Hall
- Douglas E. Comer, *Internetworking with TCP/IP, Vol 1*, Prentice Hall, Third edition
- Martin De Prycker, *Asynchronous Transfer Mode -Solution for Broadband ISDN*, Prentice Hall, Third edition

# Course Contents -1

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- IEEE 802.1 LAN Bridging Standards
- Internet Protocols
- ATM
- Interworking of LANs, Internet, and ATM

# Course Contents -2

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- Part I: IEEE 802.1 Standards
  - IEEE 802.1D - *Transparent LAN Bridging*
  - IEEE 802.1p - *Traffic Class Expediting and Dynamic Multicast Filtering*
  - IEEE 802.1Q - *Virtual Bridged LANs*

# Course Contents -3

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- Part II: Internet Protocols
  - IP, ICMP, ARP, RARP, BOOTP, DHCP
  - Routing Protocols:
    - Interior Gateway Protocols: RIP, OSPF
    - Exterior Gateway Protocols: EGP, BGP, Policy Routing
  - IP Multicast Routing
    - IGMP
    - DVMRP, CBT, MOSPF, PIM
  - IP version 6
  - Mobile IP
  - Multiprotocol Label Switching (IP Switching, Tag Switching)

# Course Contents -4

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- Part III: ATM
  - Architecture
  - Physical Layer
  - ATM Layer
  - ATM Adaptation Layer (AAL)
  - Signaling
  - Congestion Control
  - Routing: PNNI
  - Switching

# Course Contents -5

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- Part IV: Interworking between LANs, Internet, and ATM
  - LAN Emulation
  - IP over ATM



# Courses in Networks

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- EE 284/CS 244A - Introduction to Computer Networks
- EE 384A - Network Protocols and Standards
- EE 384B - Multimedia Networking and Communications
- EE 384C - High Performance Computer Network Systems
- CS 344 - Projects in Networking
- CS 341 - Advanced Topics in Data Communication