Instructor: Vahid Tabatabae
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Lecture time: Tu-Th 2:00-3:15
First class: Jan. 25
Last class: May 10
Lecture location: EGR 1108
Office hours: M 11:00-12:00, Tu: 3:30-4:30

Required books:


Course outline (26 lectures) (subject to revisions)
- Overview of communication networks and service (2 lectures) (reading: Chapter 1)
- Layering and the OSI reference model (1 lecture) (reading: pp. 34-52)
- Overview of TCP/IP (1 lecture) (reading: pp. 34-62)
- Error detection and correction (1 lecture) (reading: 166-180)
- Multiplexing, SONET and WDM (1 lecture) (reading: 207-234)
- ARQ Protocols (2 lectures) (reading: 291-315)
- Data link control protocols: HDLC, PPP (1 lecture) (reading: 324-340)
- Statistical multiplexing (1 lecture) (reading: 340-352)
- Medium access control protocols (2 lectures) (reading: 370-421)
- Local area networks and wireless LANs (2 lectures) (reading: 421-479) (Labs 1,2,3)
- Datagram and virtual circuit networks (1 lecture) (reading: 490-510)
- Routing and shortest path algorithms (1 lecture) (reading: 515-534)
- Traffic management, Quality-of-Service and congestion control (2 lectures) (reading: 539-561) (Lab 9)
• **Lecture format:** Lectures will be given using ppt slides.

• **Problem sets:** There will be 6-8 problem sets. The assignments will count 10% toward the course grade.

• **Laboratory exercises:** There will be 9 laboratory exercise sets from the Aboelela book. They use OPNET IT Guru software. The lab exercises will count 10% toward the course grade.

• **Examinations**
  - **Midterm examinations:** There will be two midterm examinations in class during the semester. Each exam will count 25% toward the course grade.
  - **Final examination:** It will be cumulative but weighted toward the last third of the course and count 30% for the course grade.