

## ECE683: Computer Network Design and Analysis - Spring 2009

Instructor: Dr. Yanchao Zhang

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Office hours: Wed/Thu: 4:00-5:00; Others by appointment

Class hours: Wed. 6:00 pm - 9:05 pm at ECEC 115

Course webpage: <http://web.njit.edu/~yczhang/ece683/ece683.html>

### Corequisite

ECE 673

### Textbook and References

- Textbook: *Communications Networks: Fundamental Concepts and Key Architectures*, 2nd Edition, A. Leon-Garcia and I. Widjaja, McGraw-Hill, 2003.
- References (not required)
  - 1) *Computer Networks*, A. Tanenbaum, 4th Edition, Prentice-Hall, 2002;
  - 2) *Data & Computer Communications*, 8th Edition, William Stallings, Prentice-Hall, 2006;
  - 3) *Data Networks*, 2nd Edition, D. Bertsekas and R. Gallager, Prentice-Hall, 1991.

### Syllabus (subject to modification by the instructor)

- Overview of Communication Networks and Services
- Layered Architectures
- Digital Transmission Fundamentals
- Multiplexing and Switching
- Peer-to-Peer Protocols and Data Link Layer
- Medium Access Control Protocols
- Local Area Networks
- Network Layer Protocols
- TCP/IP Protocols
- Network Security

### Grading

By default, a small quiz will be given at the end of each class, unless otherwise specified. Grades are based 15% on quizzes, 40% on midterm, and 45% on final. Overall average > 90% is guaranteed an A, > 80% is guaranteed a B, etc. No make-up.

### Honor Code

The NJIT Honor Code will be upheld, and any violations will be brought to the immediate attention of the Dean of Students.