

EE160 Winter 2003
Communication-System Fundamentals

When and Where: Tuesdays and Thursdays, 9:00–10:30AM in 74 Jorgensen.

Instructor: Babak Hassibi, Moore 162B, hassibi@systems.
Office hours: 10:30-11:30AM on Tue., Thur. or by appointment.

Home page: <http://www.ee.caltech.edu/EE/Faculty/babak/courses/ee160.html>

Teaching Assistants:

- TBD

Text: S. Haykin, *Communication Systems*, 4th Ed., Wiley, 2001.

- Goal is to cover chapters 1-5 (perhaps also 6)

Grading: Homework 25%, Midterm 30%, Final 45%. (Late homework is not accepted.)

Prerequisites: EE111 (or equivalent). Basic understanding of probability.

Goals:

1. To present the key laws and principles of communications systems (noise as a limiting factor, analog modulation schemes, sampling and digital transmission, performance measures, probability of error, signal-to-noise ratio, etc.).
2. To develop the skills and tools necessary to analyze communications systems.
3. To introduce some basic facts about random processes.
4. To set the stage for more advanced study of communications theory, information theory, error-correcting codes, wireless communications, optical communications, communications networks, statistical signal processing, stochastic control, etc.