EE465 – Introduction to Communication Systems


Instructor Dr. Hongbin Li (Phone: 201 216-5604; E-mail: Hongbin.Li@stevens.edu)

Class Hours Mondays 6:15-8:45 pm

Grader See the class website

Office Hours See the class website

Grading Homework and Computer projects 15%
Quizzes 15%
Midterm Exam: 35%
Final Exam: 35%

All assignments count. None will be dropped from your final grade.

Prerequisites E243 Probability and Statistics for Engineers and EE348 System Theory

Contents Review of probability and random variables, probability distribution, statistical averages, joint moments; Random processes, stationarity and ergodicity, mean, correlation, and covariance, power spectral density, transmission of random processes through LTI systems, narrowband processes, white noise; Continuous-wave (CW) modulation: AM/DSB-SC/SSB/VSF, FDM, narrowband and wideband FM, PM, superheterodyne receiver, noise in CW modulation systems; Pulse modulation: sampling theorem, PAM/PPM/PDM, PCM, quantization, coding and line codes, TDM, delta modulation, linear prediction, DPCM; Baseband pulse transmission: matched filter, error rate analysis, intersymbol interference, Nyquist’s criterion; Passband digital transmission: ASK, PSK, FSK, DPSK.

Holidays No classes on Sept. 1 (Labor Day), Oct. 13 (Fall Recess; make-up on Oct. 14)

Miscellaneous Homework/projects will be assigned on a regular basis. Attendance will be checked randomly. No late work will be accepted. No make-up exams will be given (unless under inevitable circumstances, e.g., serious illness with doctor’s proof, etc.). You are responsible for all assignments, changes of assignments, announcements of exam dates, and other course-related events announced in class or sent through e-mail.