

STOCHASTIC SYSTEMS

Mon Wed 5:30 pm — 6:50 pm, Harriman Hall, Room 108

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Office Hours: Mon Wed 2:00 pm — 4:00 pm; also by appointment

Course Outline: The course covers probability and stochastic processes. Particular topics include:

1. Basic Probability: set theory, probability axioms, Bayes' rule, independence, binomial theorem.
2. Random Variables: probability space, random variable, cumulative distribution function, probability density function, function of a random variable, expected value, Markov and Chebyshev inequalities, characteristic function.
3. Multiple Random Variables and Sums of Random Variables: joint cdf and joint pdf, laws of large numbers, central limit theorem.
4. Random Process: stationarity, autocorrelation function, power spectral density, optimal linear filtering.

Textbook: A. Leon-Garcia, *Probability and Random Processes for Electrical Engineering*, 2nd edition, Addison-Wesley, 1994 (chapters 2, 3, 4, 5, 6, 7).

Homeworks: will be given but will not count toward the final grade.

Quizzes: A 30-minute quiz will be given once every two weeks. Quizzes will be given at the beginning of class on the following dates: 9/22/99, 10/06/99, 10/20/99, 11/03/99, 11/17/99, 12/01/99. Only the five highest quiz scores will be counted toward the final grade. Any student who misses a quiz will be given a "zero" for that quiz. Absolutely no make-up quiz will be given. Each student must bring a photo ID in order to take the quizzes and the final exam.

Grading:

Quizzes 50%

Final Exam 50%

The Final Exam will be on **Wednesday, December 22, 1999 at 7:00 pm –10:00 pm.**

If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, I would urge that you contact the staff in the Disabled Student Services office (DSS), room 133 Humanites, 632-6748/TDD. DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential.