Probability And Random Variables

Syllabus

Course Meeting Times

Lectures: 3 sessions / week, 1 hour / session

Prerequisites

18.02SC Multivariable Calculus

Course Description

This course introduces students to probability and random variables. Topics include distribution functions, binomial, geometric, hypergeometric, and Poisson distributions. The other topics covered are uniform, exponential, normal, gamma and beta distributions; conditional probability; Bayes theorem; joint distributions; Chebyshev inequality; law of large numbers; and central limit theorem.

Textbook

Required

Ross, Sheldon. *A First Course in Probability*. 8th ed. Pearson Prentice Hall, 2009. ISBN: 9780136033134.

A Free and Fun-to-Read Book

Introduction to Probability (PDF - 3.1MB) by Charles Grinstead and J. Laurie Snell.

Problem Sets

There will be ten problem sets assigned throughout the semester, but there will be no problem sets in the weeks that have exams.

Exams

There will be two midterm exams, as well as a final exam for the course.

Grading

Problem Sets	20%
Midterm Exams	40%
Final Exam	40%