MATH 7360-2: Probability Theory

Time: Monday, Wednesday, Friday: 10:30–11:20

Room: Lockett 130

Prerequisite

   Math 7311 (Real Analysis I) or equivalent

Textbook

   John W. Lamperti: Probability, A Survey of the Mathematical Theory, 2nd Edition, John Wiley & Sons, Inc., 1996

Coverage

   In the first week I will give a brief review of elementary probability theory. All chapters in the textbook will be covered:

   Chapter 1: Foundation
   Chapter 2: Laws of Large Numbers and Random Series
   Chapter 3: Limiting Distributions and the Centeral Limit Problem
   Chapter 4: The Brownian Motion Process

Some particular topics: Kolmogorov's extension theorem, types of convergence, laws of large numbers, convergence of random series, characteristic functions, Bochner theorem, Levy continuity theorem, Levy equivalence theorem, central limit theorem, stable and infinitely divisible laws, Brownian motion.

Grading

   The grade will be determined by homework (70%) and the final exam (30%). Tentative scale: A 90%; B 80%; C 70%

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