

PROBABILITY

Docente : S. L. Zabell, Northwestern University

Syllabus: The course will follow the text closely. Homework will be assigned mainly from the problems at the end of sections in the book, but occasionally exercises from other sources may be assigned. The exact coverage will depend on the background of the class (in particular, prior knowledge of measure theory). In any case, we will aim at covering at least the material in the first nine sections of Billingsley.

Lectures in English

Prerequisites: Rigorous calculus (sup, inf, limsup, liminf, continuity, uniform continuity, uniform convergence, etc.); linear algebra; modern analysis (metric spaces, Hilbert spaces). Familiarity with elementary probability and Lebesgue measure is desirable.

Useful background reading: William Feller, *An Introduction to Probability Theory and its Applications*, Vol. I, 3rd edition, Wiley, 1968, Chapters 1—2, 5—6

Text book : Patrick Billingsley, *Probability and Measure*, 3rd edition, Wiley 1995

Additional reference: John Lamperti, *Probability*, 2nd ed., Wiley, 1996.