

REFERENCE BOOKS

Amongst the sources for my notes were the following books, all of which I recommend.

- Ash, R. B. *Real Analysis and Probability*
Good background on measure theory, particularly the connections between topology and measure. Recommended for martingales and conditioning.
- Billingsley, P. *Probability and Measure*
Very well written. Particularly recommended for the discussion on conditioning. Covers many topics that might have been included in this course.
- Breiman, L. *Probability*
A good book to look at after you think you know what is going on. Deceptive at times, because hard ideas are made to seem easy. Very good for weak convergence, characteristic functions, and more advanced topics. Worth owning.
- Chow, Y. S. and Teicher, H.
Probability theory: Independence, Interchangeability, Martingales
Written in a technical style, but full of information. Good on martingales and exchangeability. When I first looked at this book I didn't like it, but now I refer to it often.
- Chung, K. L. *A Course in Probability Theory*
A standard text. Too dry for my taste. A good place to look for standard proofs.
- Dudley, R. M. *Real Analysis and Probability*
A thorough text that has become one of my favourites. Read the notes at the end of each chapter to see how a real scholar works. Highly recommended.
- Feller, W. *An Introduction to Probability Theory and Its Applications, Volume II*
A classic. If you are serious about probability theory you need to own this book (and the companion volume I). Covers lots of material not found in other texts. Very good on characteristic functions; very little on martingales. Unfortunately, Feller tried to avoid measure theory.
- Hoffmann-Jørgensen, J. *Probability with a View Towards Statistics*
A modern treatment, in two volumes. Good for some measure theoretic ideas (such as regular conditional probabilities) that are seldom treated in probability texts.
- Kolmogorov, A. N. *Foundations of the Theory of Probability*
The original. It contains most of what goes into a modern probability course, in under a hundred pages. Hard reading, because notation and fashion have changed, but the ideas are mostly all there. Martingale theory wasn't invented in 1933, when the book first appeared. A landmark in the history of probability.
- Lamperti, J. *Probability: A Survey of the Mathematical Theory*
Concise and elegant. Insightful discussion of the ideas leading to the law of the iterated logarithm.
- Loève, M. *Probability Theory*
The classic text on probability. I refer to it occasionally. The latest edition comes in two volumes.
- Pollard, D. *Convergence of Stochastic Processes*
I will borrow (with modifications) some material from Chapter III for weak convergence and the central limit theorem.
- Royden, H. L. *Real Analysis*
An excellent reference for measure theory. Read Chapters 11 and 12 in particular.
- Whittle, P. *Probability via Expectation*
Expectations as the starting point for the development of probability theory; similar to my approach. Very clear.
- Williams, D. *Probability with Martingales*
A tad eccentric, but superbly clear. An author who conveys his enthusiasm for a great subject. Worth at least a browse at some stage during the course.