Chapter 2 Notes

2.2 First Construction of Brownian Motion

A. The consistency theorem

B. The Kolmogorov-Centsov theorem

2.3 Second Construction of Brownian Motion

2.4 The Space $C[0, \infty)$, Weak Convergence and Wiener Measure

A. Weak Convergence

B. Tightness

C. Convergence of finite-dimensional distributions

D. The invariance principle and the Wiener measure

2.5 The Markov Property