

Section numbers refer to *A First Course in Probability*, Seventh Edition, by Sheldon Ross.

Date	Sections	Topics
9/4	1.1–1.5	Combinatorics
9/7	1.6–2.3	Indistinguishable objects; axioms of probability
9/11	2.4, 2.5	Inclusion/exclusion formula; equally likely outcomes
9/14	2.5	More examples; Stirling's approximation
9/18	3.1–3.3	Conditional probability and Bayes' formula
9/21	3.4	Independent events
9/25	3.4, 3.5	Repeated independent trials
9/28	4.1–4.2	Random variables and distribution functions
10/2	4.3–4.5	Expectation and variance of discrete random variables
10/5	4.6, 4.8.1	Bernoulli, binomial, and geometric random variables
10/9	EXAM 1. All material covered through lecture of 10/2	
10/12	4.7, 4.9.2, 4.9.3	Poisson, negative binomial, and hypergeometric random variables
10/16	5.1, 5.2	Continuous random variables; expectation, variance
10/19	5.3–5.5	Uniform, exponential, and normal random variables
10/23	5.4.1	Normal approximation to binomial random variables
10/26	5.6.1, 5.7	Gamma random variable; functions of a random variable
10/30	6.1	Joint distributions of several random variables
11/2	6.2	Independent random variables
11/6	6.3	Sums of independent random variables
11/9	7.1–7.3	Linearity of expectation
11/13	EXAM 2. All material covered through lecture of 11/6	
11/16	7.4	Covariance and correlation
11/21	6.4, 6.5	Conditional distributions
11/27	7.5	Conditional expectation
11/30	7.7	Moment generating functions
12/4	8.1–8.2	Markov and Chebyshev inequalities; weak law of large numbers
12/7	8.3	The central limit theorem
12/11	8.3	Proof of the central limit theorem; examples.
12/18	FINAL EXAM, 8:00 A.M.–11:00 A.M. Room to be announced. The exam will be cumulative.	