

MA222. Schedule for the Spring 2008 semester.

Lecture	Textbook	Topics
Jan 14 -week 1	2.1-2.2 in [1] 1.1-1.4 in [2]	Sample space, events, probability axioms and properties
Jan 21 -week 1.5	2.3 in [1] 2.1-2.4 in [2]	Counting principles, combinatorial methods, permutations, combinations. (MLK bday on Jan 18)
Jan 28 -week 2.5	2.4-2.5 in [1] 3.1-3.5 in [2]	Conditional probability, Bayes theorem, independence
Feb 4 -week 3.5	3.1-3.3 in [1] 4.1-4.6 in [2]	Discrete random variables, Distribution functions. Expectation and variance of discrete variables. Standardization.
Feb 11 -week 4.5	3.4-3.6 in [1] 5.1-5.3 in [2]	Special cases of discrete random variables: Bernoulli, Binomial, Geometric, Negative Binomial. The Poisson distribution.
Feb 18 -week 5	4.1-4.2 in [1] 6.1-6.3 in [2]	Continuous random variables, PDF, CDF. Functions of random variables. Expectation and variance. (President's day on Feb 18)
Feb 25 -week 6		Catching up lecture. TEST 1 on Feb 27 to cover material from the first 5 weeks.
Mar 3 -week 7	4.1-4.4 in [1] 7.1-7.5 in [2]	Special cases of continuous random variables: Uniform distribution, normal, exponential. (Gamma and Beta - time permitting)
Mar 10 -week 8	See handouts	Special Lecture: The Poisson process.
Mar 17 week -		SPRING RECESS
Mar 24 week 9	5.1-5.2 in [1] 8.1-8.3 in [2]	Distribution of two random variables. Joint and conditional distributions.
Mar 31 week 10	11.1, 11.4, 11.5 in [2]	Moment Generating Functions. Characteristic Functions. Limit Theorems. Central Limit Theorem.
April 7 week 11		Catching up. TEST 2 on April 9 to cover material up to and including week 10
April 14 week 12	1.1-1.4 in [1] + lecture notes	STATISTICS: Describing distributions using graphs. Sample. Mean, Variance, Quintiles.
April 21 week 13	6.1-6.2 in [1]	Point Estimation. Methods of point estimation.
April 28 week 14	7.1-7.3 and 8.1-8.2 in [1]	Confidence Intervals and testing based on a single population sample.
April 30- May 12		Review and Final Exam period for Spring semester FINAL EXAM on (?) to cover material from the entire course

References:

[1] Jay L. Devore, *"Probability and Statistics for Engineering and the Sciences"*, seventh edition, Duxbury, 2007

[2] Saeed Ghahramani *"Fundamentals of Probability with Stochastic Processes"*, third edition, Prentice Hall, 2004