MA222. Schedule for the Spring 2012 semester.

Lecture	Textbook	Topics
Jan 18 week 0.5	2.1-2.2 in [1] 1.1-1.4 in [2]	Sample space, events, probability axioms and properties (MLK bday on Jan 16)
Jan 23 -week 1.5	2.3 in [1] 2.1-2.4 in [2]	Counting principles, combinatorial methods, permutations, combinations.
Jan 30 week 2.5	2.4-2.5 in [1] 3.1-3.5 in [2]	Conditional probability, Bayes theorem, independence
Feb 5 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 13 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 20 week 5.5	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 20, made up the next day)
Feb 27 week 6 .5		Catching up lecture. TEST 1 on Feb 29 to cover material from the first 5 weeks.
Mar 5 week 7.5	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 12 week -		SPRING RECESS
Mar 19 week 8.5	See handouts	Special Lecture: The Poisson process.
Mar 26 week 9.5	5.1-5.2 in [1] 8.1-8.3 in [2]	Distribution of two random variables. Joint and conditional distributions.
Apr 2 week 10.5	11.1, 11.4, 11.5 in [2]	Moment Generating Functions. Characteristic Functions. Limit Theorems. Central Limit Theorem. (April 6 no recitation – Good Friday)
April 9 week 11.5		Catching up. TEST 2 on April 11 to cover material up to and including week 10
April 16 week 12.5	1.1-1.4 in [1] + lecture notes	STATISTICS: Describing distributions using graphs. Sample. Mean, Variance, Quantiles.
April 23 week 13.5	6.1-6.2 in [1]	Point Estimation. Methods of point estimation.
April 30 week 14	7.1-7.3 and 8.1-8.2 in [1]	Confidence Intervals and testing based on a single population sample. (May 2 class is canceled – instead recitation missed on Good Friday is held instead)
May 3- May 16		**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

Please note Devore has been the textbook used in the past. I provided the corresponding chapters there in case you can get an old version for cheap. The Gharamani textbook not only is much better but the assignment problems will be selected from it.