MA222. Detailed schedule for the summer of 2011.

Lecture	Textbook	Topics
May 19 (R)	2.1-2.4 in [1] 1.1-1.4 in [2]	Introduction to Probability. Sample space, events, probability axioms and properties
May 23 (M)	2.5 in [1] 2.1,2.2 in [2]	Counting principles, combinatorial methods,
May 24 (T)	? in [1] 2.3, 2.4 in [2]	Permutations, combinations.
May 25 (W)	2.6-2.8 in [1] 3.1-3.5 in [2]	Conditional probability, Bayes theorem, Independence
May 26 (R)		Commencement day. No classes.
May 30 (M)		Memorial day Holiday. No classes
May 31 (T)	3.1, 3.2 in [1] 4.1-4.6 in [2]	Discrete random variables, Distribution functions. Expectation and variance of discrete variables. Standardization.
Jun 1 (W)	3.3+ch5 in [1] 5.1-5.3 in [2]+Ch 4 in [1]	Special cases of discrete random variables: Bernoulli, Binomial, Geometric, Negative Binomial. The Poisson distribution.
Jun 2 (R)		TEST 1
Jun 6 (M)	3.3+ch7 in [1] 6.1-6.3 in [2]	Continuous random variables, PDF, CDF. Functions of random variables. Expectation and variance.
Jun 7 (T)		(cont)
Jun 8 (W)	Ch 6 in [1] 7.1-7.5 in [2]	Special cases of continuous random variables: Uniform distribution, normal, exponential. (Gamma and Beta - time permitting)
Jun 9 (R)		
Jun 13 (M)	5.6 in [1]+handout	Special Lecture: The Poisson process.
Jun 14 (T)	3.4 in [1] 8.1-8.3 in [2]	Distribution of two random variables. Joint and conditional distributions.
Jun 15 (W)		Review
Jun 16 (R)		TEST 2 (comprehensive)
Jun 20 (M)	11.1, 11.4, 11.5 in [2]	Moment Generating Functions. Characteristic Functions. Limit Theorems. Central Limit Theorem.
Jun 21 (T)		(cont)
Jun 22 (W)		Special Lecture: Review of probability
Jun 23 (R)	1.1-1.4 in [1] + lecture notes	STATISTICS: Describing distributions using graphs. Sample. Mean, Variance, Quantiles.
Jun 27 (M)	Ch 8 in [1]	Point Estimation. Methods of point estimation.
Jun 28 (T)	Ch 9 in [1]	Confidence Intervals and testing based on a single population sample.
Jun 29 (W)		(cont)
Jun 30 (R)		Review
Jul 4 (M)		Independence Day – No classes
Jul 5 –Jul 8		**Review** and **Final Exam** period for the summer semester FINAL EXAM on (?) to cover material from the entire course

References:

[1] Walpole R., R. Myers, S. Myers, and K. Ye "*Probability and Statistics for Engineers and Scientists"*, seventh edition, Prentice Hall, 2002.

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