

**THE COLLEGE OF STATEN ISLAND  
DEPARTMENT OF MATHEMATICS  
COURSE OUTLINE**

**MATH 113 - INTRODUCTION TO PROBABILITY AND STATISTICS  
With COMPUTER APPLICATIONS**

Fall 2005  
JN:ab

REQUIRED TEXT: Statistics and Probability in Modern Life, (6<sup>th</sup> Edition)  
by J. Newmark; Saunders College Publishing Co. (1997)

Lesson	Topic	Required Reading (pages)	Homework Assignment
1	Introduction	1-22	18/1-21 odd
2	Introduction to MINITAB Using the computers in 1S-103, 1S-108, 1S-213	22-26 Also MINITAB Assignment #1 from handouts	26/1-15
3	Frequency distributions and Histograms	40-48	50/1,3,5,7,11,13,15
4	Bar graphs, Pie Charts and Other Graphical Techniques	55-74	74/1,5,7,11,17,18,19,21
5	Reading and Understanding Statistical Charts and Graphs	Supplementary handouts	
6	Stem and Leaf Diagrams, Misuse of Statistics, Index Numbers	85-89, 91-94, 98-100	89/1,5; 94/1,5; 101/1,5,8,10
7	Using MINITAB for Histograms, Stem-and-Leaf Diagrams and Dotplots in GSTD and GPRO Mode	102-105 MINITAB Assignments #2 and #3	106/1-6
8	Summation Notation	126-130	131/1,3,5,7,9
9-10	Measures of Central Tendency	132-142	142/1,3,7,9,15,17,19,22
11	Measures of Variation	149-157	157/1,3,7,9,11,13,15
12	Using MINITAB	186-187 MINITAB Assignment #4	187/1-4
13	Percentiles, Percentile Rank and z-scores	165-176; 179-183	176/1,3,4,7,9 183/1,3,6,8,9
14	<b>Review for Exam</b>	27-34, 108-120, 190-200	Assigned by Instructor
15	<b>EXAM #1</b>		

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16	Definition of Probability	208-219	220/1,3,5,9,10,13,19,21
17	Counting Problems	226-230	230/1,3,7,9,11,17,18
18-19	Permutations and Combinations	233-239, 242-251	240/1,3,9,10,15,17,20 252/1,3,7,8,11,15,17
20	Odds and Mathematical Expectation	254-258	258/1,3,6,9,10,14
21	Using MINITAB	261-263	263/1-4
22	Discrete Probability Distributions	333-339	339/1,3,5,9,13,15,17,19
23	The Mean and Variation of a Random Variable	342-349	349/1,5,8,11,13,14
24	The Binomial Distribution	355-367	368/1,5,7,11,12,15
25	The Mean and Standard Deviation of the Binomial Distribution	371-373	373/1,3,7,9,10,11
26	Using MINITAB	384-386 MINITAB Assignment #5	386/1,2,3,5,6,8
27	<b>Review for Exam</b>	264-274; 388-398	Assigned by Instructor
28	<b>EXAM #2</b>		
29-30	The Normal Distribution	403-416	416/1,3,5,7,9,12,13
31	Applications of the Normal Distribution	419-422	422/1,3,5,8,9,13,16
32	Normal Curve Approximation to the Binomial Distribution	425-431	431/1,3,7,12,15,17,19
33	Using MINITAB	435-437 MINITAB Assignment #6	437/1-4
34	Hypothesis Testing	533-538	Assigned by Instructor
35	Linear Correlation; Coefficient of Correlation; Reliability	581-599 604-605	599/1,3,7,11 605/1,3,7,11
36-37	Linear Regression; Method of Least Squares	606-615	616/1,5,8,9,10
38	Standard Error of the Estimate	620-626	626/1,5,8,9,10

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39	Using MINITAB	636-641 MINITAB Assignment #7	641/1-4
40	<b>Review for Exam</b>	438-446; 641-651	Assigned by Instructor
41	<b>EXAM #3</b>		
42	The Chi-Square Distribution	658-664	664/1,3,6,7,11,13
43	Goodness of Fit	669-673	673/1,3,5,6,9,11
44	Contingency Tables	676-679	680/1,3,6,7,9,11
45	Using MINITAB	684-685 MINITAB Assignment #8	685/1-3
46	Tests Concerning Means for Large Samples	538-547	547/1,3,5,7,8,11
47	Tests Concerning Means for Small Samples; The t-distribution	549-551	552/1,3,5,7,11
48	Tests Concerning Differences	554-558	559/1,3,4,6,9
49	Tests Concerning Differences between Means for Small Samples	561-563	564/1,5,6,8,9
50	Test Concerning Proportions	566-570	570/1,4,7,9,11
51-52	Using MINITAB (z-test and p-values)	572-574	574/1,3,4,5,7
53	<b>Review for Exam</b>	574-584	Assigned by Instructor
54	<b>EXAM #4</b>		
55-56	<b>Review for FINAL EXAM</b>		