

**Stat 214 TR**  
**Elementary Statistics**

**Text:** *Statistics, The Art and Science of Learning from Data*, Agresti and Franklin, Prentice Hall, 2007.

**Prerequisites:** Credit for MATH 100 or 105. A TI-83 series or TI-84 series graphing calculator is required.

This course provides an introduction to statistics for students from various disciplines. The mathematical prerequisite is an understanding of basic college algebra (MATH 100 or 105). The core topics are: graphical representation of data, descriptive statistics, random variables, probability distribution of a discrete random variable, binomial and normal distributions, confidence intervals, hypothesis testings, linear regression and correlation, inference concerning multinomial proportions, and contingency tables. The precise order of presentation, emphasis, and depth of coverage of specific topics will vary by instructor. The outline given below provides an indication of the topics covered, their location in the textbook, and approximate coverage time.

Lesson	Section and Topic	Assignment
1	1.1 How can you investigate using data?	p. 9: 1
	1.2 We learn about populations using samples	p. 15: 7,9,11,13
2	2.1 What are the types of data?	p. 29: 1,3,5,7
	2.2 How can we describe data using graphical summaries?	p. 45: 9,11,14,15,19,23,25,26
3	2.3 How can we describe the center of quantitative data?	p. 55: 30,31,33,34,41
	2.4 How can we describe the spread of quantitative data?	p. 63: 43,45,47,49,51
4	2.5 How can measures of position describe spread?	p. 72: 57,59,62,69,71
5	4.1 Should we experiment or should we merely observe?	p. 154: 1,3,7,9,11
	4.2 What are good ways and bad ways to sample?	p. 165: 15,19,21,25,27
	4.3 What are good ways and bad ways to experiment?	p. 172: 31,33,35,37
6	Review	
7	TEST 1	
8	5.1 How can probability quantify randomness?	p. 200: 1,3,5,7,11
	5.2 How can we find probabilities?	p. 212: 15,17,19,23
9	6.1 How can we summarize possible outcomes and their probabilities?	p. 255: 1,5,7,9
	6.2 How can we find probabilities for bell-shaped distributions?	p. 267: 13,15,17,19,21,23,27
10	6.3 How can we find probabilities when each observation has two possible outcomes?	p. 276: 33,35,37,40
11	6.4 How likely are the possible values of a statistic?	p. 286: 43,47,49,50
12	6.5 How close are sample means to population means?	p. 296: 53,55,57
	6.6 How can we make inference about a population?	p. 303: 61,63
13	Review	
14	TEST 2	
15	7.1 What are point and interval estimates of population parameters?	p. 321: 1,4,5,7
	7.2 How can we construct a confidence interval to estimate a population proportion?	p. 332: 11,13,15,19
16	7.3 How can we construct a confidence interval to estimate a population mean?	p. 343: 27,29,31,35,37,39
17	8.1 What are the steps for performing a significance test?	p. 372: 1,3,5,7
	8.2 Significance tests about proportions.	p. 385: 11,13,15,17,19
18	8.3 Significance tests about means.	p. 398: 29,31,32,33
19	9.1 Categorical response: how can we compare two proportions?	p. 438: 3,6,7,9,10

Lesson	Section and Topic	Assignment
20	Review	
21	TEST 3	
22	9.2 Quantitative response: how can we compare two means?	p. 449: 16,17,19,20,23
23	3.1 How can we explore the association between two categorical variables?	p. 95: 1,3,5,7
	3.2 How can we explore the association between two quantitative variables?	p. 107: 9,10,14,15,16,19
	3.3 How can we predict the outcome of a variable?	p. 120: 23,24,28,31
24	10.1 What is independence and what is association?	p.490: 1,4
	10.2 How can we test whether categorical variables are independent?	p. 501: 9,13,17
25	11.1 How can we "model" how two quantitative variables are related?	p. 533: 1,2,3,5
	11.2 How can we describe the strength of association?	p. 545: 13,15,16,17
26	11.3 How can we make inferences about the association?	p. 552: 29,31,35
27	REVIEW FOR FINAL EXAM	

**Emergency Evacuation Procedure:** A map of this floor is posted near the elevator marking the evacuation route and the **Designated Rescue Area**. This is an area where emergency service personnel will go first to look for individuals who need assistance in exiting the building. Students who may need assistance should identify themselves to the teaching faculty.

Last updated 7 August 2007.