

Math 1110 – Statistics
Summer 2008

Instructor: Christina Sonnek
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Office: H114
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Class Website: <http://webs.anokaramsey.edu/sonnek>
Office Hours: Before and after class or by appointment

Class Meetings: 6:30 – 9:30 M Th

Text: Elementary Statistics 6th edition by Bluman

Attendance: You are expected to attend all class meetings. If an emergency occurs, it is your responsibility to make up the missed work.

Content: Chapters 1 – 11

Calculators: A graphing calculator is required for this course. Instruction will be given using the TI-83. I HIGHLY recommend an 83 or 84

Assignments: My expectation is that you will spend an average of two hours outside of class for each hour in class. There will be some assignments that will be turned in for credit. Late assignments will NOT be accepted. Other assignments may be given.

Exams:	Exam 1 – Chapter 1 – 4	June 16	100 points
	Exam 2 – Chapter 5 – 7	July 7	100 points
	Exam 3 – Chapter 8 – 11	July 21	100 points
	Final – Comprehensive	July 24	200 points

Exams must be taken during the scheduled time. No late exams will be given. In case of emergency, you **must** contact me **before** the time of the exam. Noncompliance with this procedure will result in a grade of zero for that exam. Any type of cheating will also result in a zero.

Grading:	90 – 100%	A
	80 – 89%	B
	70 – 79%	C
	55 – 69%	D
	below 55%	F

Pass/No Credit If you wish to take this course on a pass/no credit basis, you must inform me in writing by the end of the first week. Passing is 70% or better. Be sure to check with your counselor first.

Incomplete No incomplete will be considered unless you are earning a C or above, have completed more than half the course, and have missed class because of extreme circumstances.

Drop/Withdraw See Student Handbook for last day to withdraw.

Accommodations for Students with Special Needs

Anoka Ramsey Community College does not discriminate on the basis of race, color, national origin, gender sexual orientation, religion, age or disability in employment or in the provision of our services. Within the first week of class, students with special needs that require accommodations should contact the Director of Access Services to discuss possible support services.

At the conclusion of the course, the student should be able to:

1. distinguish between the two basic types of statistics – descriptive and inferential.
2. identify data as continuous or discrete.
3. accurately interpret graphical displays of data.
4. construct frequency tables, histograms, box plots and stem-and-leaf plots from raw data.
5. describe distributions using appropriate statistical vocabulary.
6. calculate and explain the meaning of the following statistics: mean, median, mode, range, variance, standard deviation, percentile, and z-scores from and frequency table data.
7. calculate probabilities using the addition and multiplication rules, the fundamental counting principle, and sample spaces.
8. construct a probability distribution for a random variable; calculate the mean, variance, standard deviation, and expected value for a discrete random variable; calculate probabilities, means and standard deviations for a binomial random variable.
9. calculate z-scores and probabilities for a normally distributed random variable; use the normal probability distribution to approximate a binomial probability.
10. apply the Central Limit Theorem to describe the sampling distribution of \bar{x} and calculate probabilities; describe the sampling distribution of a sample proportion and calculate probabilities.
11. calculate confidence intervals (using both large and small samples) for means and proportions; calculate sample sizes for means and proportions.
12. use the normal probability distribution and the student's t-distribution to test hypotheses about a mean or a proportion and calculate the p-value for each test; interpret the results of the test.
13. test hypotheses about two means from independent samples and perform paired t-tests on dependent samples; interpret the results of the tests.
14. calculate and interpret linear correlations and regressions.
15. perform chi-square tests of independence, equality of proportions, and homogeneity.
16. use Minitab to find descriptive statistics for a data set, display the data, find normal and binomial probabilities, perform chi-square tests, produce scatterplots, perform linear correlation and regression analysis; interpret the results of the Minitab printout.