

Stat 250 Fall 2014  
Jeff Ledahl  
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Office: GMCS 566  
Office Hours: Monday through Friday 9:30 - 10:30  
Other times by appointment

Required Materials:  
TI 30X IIS or TI 30X IIB calculator  
ParScore Form F-289

Optional: Any introductory textbook on Statistics, such as Mind on Statistics by Utts/Heckard

Grading:  
Homework: 20% (lowest homework grade dropped)  
Quizzes: 40% (lowest quiz grade dropped)  
Midterm: 15%  
Final: 25%

Midterm date: Friday, October 24 6:00 - 8:00 pm  
Final date: Monday, December 15 10:30 - 12:30

Grades will be assigned as follows:

|             |    |               |    |
|-------------|----|---------------|----|
| 92.6%-100%  | A  | 72.6%-77.5%   | C  |
| 90%-92.5%   | A- | 70%-72.5%     | C- |
| 87.6%-89.9% | B+ | 67.6%-69.9%   | D+ |
| 82.6%-87.5% | B  | 55%-67.5%     | D  |
| 80%-82.5%   | B- | Less than 55% | F  |
| 77.6%-79.9% | C+ |               |    |

### Student Learning Goals

After completing the course, students should be able to:

- Recognize whether an experiment or survey is well designed.
- Understand how to produce a sample that represents the population of interest.
- Summarize data using both graphical and numerical methods.
- Produce and interpret statistics and graphs, using regression techniques, to describe the relationship between two numerical variables.
- Use basic probability principles in a variety of practical applications
- Identify, and calculate probabilities for, binomial and normal probability distributions.
- Understand the concept of sampling distributions, in particular the sampling distribution of the sample proportion
- Use statistical methods to construct, and interpret, interval estimates for population proportions, population means in the case that the standard deviation is known, and in the case where the standard deviation is estimated, the difference between 2 population proportions, the difference between 2 population means, and the population mean of paired differences
- Formulate, test and interpret various hypotheses for population proportions, population means in the case that the standard deviation is known, and in the case where the standard deviation is estimated, the difference between 2 population proportions, the difference between 2 population means, and the population mean of paired differences, as well as a chi-squared test of independence for two categorical variables