

**STATISTICS 213**  
**“STATISTICAL METHODS I”**  
**Fall 2004**

**SYLLABUS**

**NOTE: All quizzes will be written in the lab. No formula sheets permitted for the Quizzes or Midterm!!**

**Tentative schedule for quizzes and midterm**

Quiz 1 Sept 28<sup>th</sup> and 29<sup>th</sup>

Quiz 2 Oct 12<sup>th</sup> and 13<sup>th</sup>

Quiz 3 Oct 26<sup>th</sup> and 27<sup>th</sup>

Midterm Nov 4<sup>th</sup> (written in class)

Quiz 4 Nov 16<sup>th</sup> and 17<sup>th</sup>

Quiz 5 Nov 30<sup>th</sup> and Dec 1<sup>st</sup>

Final – decided by register’s office (1 standard sized formula sheet permitted)

No classes or labs on October 11<sup>th</sup> (Monday), November 11<sup>th</sup> (Thursday) & November 12<sup>th</sup> (Friday).  
Classes end on Thursday, December 9<sup>th</sup>.

**Topics Covered**

Sections covered in suggested text “Statistics 9<sup>th</sup> edition” by McClave & Sincich. Try to do as many questions as possible from the text that relate to these sections and topics.

- (1) Distributions: location, spread, shape. Mean, median, variance, percentiles, quartiles, histograms, boxplots. Stem and Leaf plots. Numerical and graphical methods. (Chpater 1&2)
- (2) Probability: sample spaces, events, frequency, Venn diagrams, mutually exclusive, independent events, Bayes’s Rule, combinatorics. (Chpater 3)
- (3) Expectations: random variables, discrete and continuous. Distributions with the Binomial and Poisson as the prime examples. Simple functions of random variables. Expectations including theoretical means and variances. (Chpater 4)
- (4) Normal Distribution: Basic introduction to using Normal tables and calculating outcome frequencies. Simple examples using the Normal and Binomial. Central Limit theorem (Chapter 5.3-5.5, chapter 6.3)
- (5) Confidence intervals and hypothesis testing for means and proportions. Sample sizes for desired error margins and p-values. (Chapter 7,Chapter 8.1-8.5)
- (6) Least Squares Regression Line. (Chapter 11.1-11.4, 11.6-11.7)