STATISTICS 217
"STATISTICAL METHODS II"
Spring 2005
SYLLABUS

NOTE: <u>All quizzes</u> will be written in the lab. No formula sheets permitted for the quizzes. Tables will be provided.
<u>Final</u> will be arranged by the registrar's office. One standard sized formula sheet permitted. Write whatever you want on both sides. Tables will be supplied for final. Flow chart will not be provided.

Schedule for quizzes and midterm

Quiz 1 May 25th
Quiz 2 June 1st
Quiz 3 June 8th
Midterm June 9th
Quiz 4 June 15th
Quiz 5 June 22nd

No classes or labs Monday, May 23rd, and Friday, June 3rd.
Classes end on Friday, June 24th

Topics Covered

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

(1) Normal Distribution: Basic introduction to using Normal tables and calculating outcome frequencies and probabilities. Central Limit theorem. Using z and t tables. (chapter 5.3-5.4, chapter 6.3)
(2) Confidence intervals for the means, proportions. Required sample sizes for given interval width. (Chapter 7)
(3) Introduction to hypothesis testing. Acceptance and rejection regions. P-values Type I and Type II error. Hypothesis about the means and proportions including Student T- test. Power function of test involving the mean and proportion. (Chapter 8.1-8.6)
(4) Hypotheisis testing and confidence interval for the variance. (Chapter 8.7)
(5) Comparison of two population standard deviations (or varicances). Comparisons of two population means and two population proportions including paired Student T-test. Confidence intervals for the difference of two sample means and proportions. (Chapter 90
(6) Comparison of 3 or more population means. One-way and two-way ANOVA. (Chapter 10.1-10.4)
(7) Non-Parametric tests. Wilcoxon signed rank test , Mann-Whitney test , Kruskal-Wallis Test.... (Chapter 14.1-14.5)
(8) Chi-squared goodness of fit test. Tests of homogeneity, independence and contingency tables… (Chapter 13)
(9) Linear regression model, scattergrams, Least Squares Method. Estimation of the intercept and slope, confidence intervals and tests. Regression ANOVA and the F- test. Coefficients of correlation and determination. Predictions and their confidence intervals. (Chapter 11)