STATISTICS 217
"STATISTICAL METHODS II"
Winter 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.

<u>Schedule for quizzes and midterm</u>
Quiz 1 Jan 24th and 25th
Quiz 2 Feb 7th and 8th
Quiz 3 Feb 28th and March 1st
Midterm March 16th (written in class with one-sided formula sheet)
Quiz 4 March 28th and 29th
Quiz 5 April 11th and 12th

No classes or labs from February 20-27th , and on March 25th
Classes end on Friday, April 15th .

<u>Topics Covered</u>
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)