1990 W-91

J. Nutting

GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF BUSINESS ADMINISTRATION
COURSE OUTLINE

BA 206 STATISTICS FOR BUSINESS 3(3-2)

TEXT: **Introductory Statistics For Business And Economics, 4th Edition, John Wiley and Sons, 1990 and Students Workbook**

PREREQUISITE **BA 105**

COURSE DESCRIPTION **An introduction to the use of random variables, the binomial and normal** probability distributions, estimation, tests of hypotheses and small sample theory in statistics. Practical applications will be emphasized in the course. As well students will be introduced to statistical software such as Minitab and Lotus.

COURSE OBJECTIVES To provide students with a knowledge of statistics. This course in conjunction with BA 105 provides an exemption to the CGA Managerial Statistics 203 course and to the CMA Quantitative Methods 332 course.

GRADING

Midterm Exam	30%
Final Exam	40%
Assignments	30%

COURSE CONTENT

1. Probability Distributions
   - Discrete Random Variables
   - Mean and Variance
   - Binomial Distribution
   - Continuous Distributions
   - Normal Distribution
   - Random Variable Functions

2. Two Random Variables
   - Distributions
   - Functions of two Random Variables
   - Convariance
   - Linear Combination of Two Random Variables

3. Sampling
   - Random Sampling
   - Moments of the Sample Mean
   - Shape of the Sampling Distributions

4. Point Estimation
   - Populations and Samples
   - Efficiency of Unbiased Estimators
   - Efficiency of biased Estimators

5. Confidence Intervals
   - A Single Mean
   - Small Sample t
   - Difference in Two Means and Independent Samples
   - Difference in Two Means and Matched Samples
   - Proportions

6. Hypothesis Testing
   - Hypothesis Testing Using confidence Intervals
   - p-Value
   - Classical Hypothesis Tests

7. Analysis of Variance
   - One Way ANOVA
   - Two Way ANOVA
   - Confidence Intervals

8. Regression, Fitting A Line
   - Introduction
   - Ordinary Least Squares
   - Advantages of OLS and WLS

9. Simple Regression
   - The Regression Model
   - Sampling Variability
   - Confidence Intervals and Tests for B
   - Predicting Y for a given level of X
   - Extending the Model

10. Multiple Regression
    - Why Multiple Regression
    - The Regression Model and Its LOS fit
    - Confidence Intervals and Statistical Tests
    - Regression Coefficients as Multiplication Factors
    - Simple and Multiple Regression Compared

11. Regression Extensions
    - Dummy Variables
    - Analysis of Variance By Regression
    - Regression
    - Simplest Nonlinear Regression

12. Correlation
    - Simple Correlation
    - Correlation and Regression
    - The Two Regression Lines
    - Correlation In Multiple Regression
    - Multicollinearity