

**Grande Prairie Regional College
Department of Arts, Commerce and Education**

**MANAGEMENT SCIENCE 3120
Applied Statistics for Business and Economics II**

Winter 2004

INSTRUCTOR: Richard Beeson, B.Sc., M.B.A.
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OFFICE: C306
OFFICE HOURS: 10:00 to 11:20 TR or by appointment
CLASS TIME: 08:30 - 09:50 A.M. MW
PRE-REQUISITES: MS3010 or ST1510
TEXT: Berenson, Levine, Krehbiel, *Basic Business Statistics, Ninth Edition*, Prentice Hall, 2004

Course Description:

Statistical inference for variance; statistical inference for the means; proportions and variances from two populations; analysis of variance; non-parametric statistics; joint probability distributions; covariance; correlation and independence; contingency tables; simple linear regression; multiple linear regression; non-linear regression; and time series analysis are topics covered in the course.

There is a strong emphasis on the microcomputer and the statistical software, **SPSS for Windows**. This software is available in lab. Students are expected to become familiar with statistical analyses using SPSS. To integrate the computer use into the course, a term-paper is planned (data collection, data entry, model building, statistical calculation & output, output interpretation).

Prerequisite:

MS3010 or ST1510

Grading:

Term Paper	20 %
Examinations	80 %
First Exam	25%
Second Exam	25%
Final Exam	30 %

Course Schedule:

Text Reading

Week 1 Jan5-9

Introduction and Data Collection:

Ch. 1

Week 2 Jan12-16

Presenting Data in Tables and Charts:

Ch. 2

Numerical Descriptive Measures:

Ch. 3

Week 3 Jan19-23

Some Important Discrete Probability Distributions:

Ch. 5

The Normal Distribution:

Ch. 6

Week 4 Jan26-30

Sampling Distributions:

Ch. 7

Week 5 Feb2-6

Confidence Intervals Estimation:

Ch. 8

Week 6 Feb9-13

Midterm1

Fundamentals of Hypothesis Testing One-Sample Tests:

Ch. 9

Week 7 Feb17-21 Reading Week:Week 8 Feb23-27

Two Sample Tests With Numerical Data:

Ch. 10

Week 9 Mar1-5

Analysis of Variance:

Ch. 11

Week 10 Mar8-12

Tests for Two or More Samples with Categorical Data

Ch. 12

Week 11 Mar15-19

Simple Linear Regression:

Ch. 13

Week 12 Mar22-26

Midterm 2

Introduction to Multiple Regression:

Ch. 14

Week 13 Mar29-Apr2

Multiple Regression Model Building:

Ch. 15

Week 14 Apr5-9

Time Series Analysis and Forecasting:

Ch. 16

Week 15 Apr12-16

Statistical Applications in Quality and Productivity Management:

Ch. 18