

# Grande Prairie Regional College

## Dept. of Psychology

**Course #:** *Psychology 2110*  
**Course Title:** *Statistical Methods For Psychological Research*  
**Date:** *January 9 - April 21, 1995*  
**Time:** *Mon. 3-6 pm & Tus. 3-4 pm.*  
**Instructor:** *A. M. AL-Asadi*  
**Office:** *C-209*  
**Phone Number:**

### Prerequisites

Psychology 1040 and Math 30, or consent of the instructor

### Text

- Gravetter, F. J. & Wallnau, L. B. (1992). Statistics for the behavioural sciences. (3rd. Edition). West Publishing Company, California.
- Gravetter, F. J. & Wallnau, L. B. (1992). Study guide to accompany statistics for the behavioural sciences. (3rd. Edition). West Publishing Company, California.

### Course Description

This is an introductory course to the statistical methods that are used by behavioural scientists as they analyze and draw conclusions from research data. The statistical techniques that are employed vary with the type of data and the kind of questions which the research is attempting to answer. These techniques include the tabulation and graphic summarization of data, numerical description of averages, variability, and measures of relationships, probability and theoretical distributions, and statistical tests. In addition, students will be introduced to the use of SPSS-X (one of the more widely used statistical packages) on the college's main-frame computer.

### Course Objectives

Although some elementary computations are required, the emphasis will be placed on conceptual understanding of concepts, methods, and procedures. Statistical procedures can be practical and useful if they are used appropriately. Number crunching is left to the computer; understanding is left to you. The computer output is as good as what you told the computer to do. Therefore, the emphasis will be on formulating hypotheses, identifying your subjects, identifying measures to be used, collecting data, choosing the appropriate statistical procedure(s) to analyze your data, interpreting your results, and conveying all these factors in writing to others. In addition, the students will be able to work with the main-frame computer and to conduct some elementary statistical analyses of data through the use of SPSS-X.

## Timetable

| <u>Date</u> | <u>Text</u>   | <u>Topic</u>                         | <u>Questions</u>        |
|-------------|---------------|--------------------------------------|-------------------------|
| Jan. 9      | Ch. 1         | Introduction to statistics           | 4, 6, 8, 12, 24         |
| Jan. 16     | Ch. 2         | Frequency Distributions              | Class Problem           |
| Jan. 23     | Ch. 3         | Central Tendency                     | 2b, 4, 6, 10, 24, 26    |
| Jan. 30     | Ch. 4 & 5     | Variability & standard distribution. | 10, 12(add)/8, 16,18,22 |
| Feb. 6      | Ch. 6         | Probability                          | 2, 4, 6                 |
| Feb. 13     | Ch. 7 & 8     | Samples & hypothesis testing         | 6, 8/                   |
| Feb. 20     | Ch. 16        | Correlation and Regression           | 8, 12, 24               |
| Mar. 6      | Ch. 9 & 10    | t-test, Independent samples          | 12, 20/4, 6, 20         |
| Mar. 13     | Exam 1        |                                      |                         |
| Mar. 13     | Ch. 11 & 12   | Dependent samples & Estimation       | 6, 10, 20               |
| Mar. 20     | Ch. 13        | ANOVA                                | 6, 12, 18               |
| Apr. 3      | Ch. 15        | ANOVA                                | 2, 8, 14                |
| Apr. 10     | Ch. 17        | Chi-square                           | 6, 16                   |
| Apr. 17     | Presentations |                                      |                         |

## Assignments

- Selected exercises from the text book and/or handouts. 20
- Three multiple choice questions from each covered chapter. 10
- A submitted report of a t-test, correlation, or ANOVA study. 15
- A presentation of analysis of the result section of a published article. 10
- A midterm examination. 10
- A final examination with two sections: multiple choice & open book Questions. 35

## Grading

9-point grading system

| Scale | % equivalent | Designation |
|-------|--------------|-------------|
| 9     | 90-100       | Excellent   |
| 8     | 80-89        | Excellent   |
| 7     | 72-79        | Good        |
| 6     | 65-71        | Good        |
| 5     | 57-64        | Pass        |

| Scale | % equivalent | Designation |
|-------|--------------|-------------|
| 4     | 50-56        | Pass        |
| 3     | 45-49        | Fail        |
| 2     | 26-44        | Fail        |
| 1     | 00-25        | Fail        |
|       |              |             |