## PSYCHOLOGY 101-05 – STATISTICS FOR PSYCHOLOGY

Instructor Sharon Furtak, Ph.D. E-mail furtak@csus.edu

Class Meetings MWF 2 - 2:50am in Tahoe 1007
Office Hours Mon 3pm - 6pm or by appointment

**Office Location** Amador 357A

**Required Textbook:** "Statistics for Psychology" by Aron, Aron, & Coups, 6<sup>th</sup> ed. available at the Bookstore: loose leaf \$124.50, hard cover \$191, or e-book \$92.75.

**Required Calculator:** You will be required to have a basic calculator for quizzes and exams. It should be able to add, subtract, multiple, divide and take the square root. Graphing calculators are *not* allowed. You will not be allowed access to phones, computers or additional devices other than a calculator during quizzes and exams. *All work must be shown by hand for credit to be given*.

**Course Description:** Introduction to descriptive and inferential statistics as tools for evaluating data from Psychological research. Topics include: measures of central tendency, measures of variability, correlation and regression, sampling distributions, hypothesis testing procedures including t-tests and analysis of variance, and selected other topics. Application of hand computation will be emphasized to include the interpretation and significance of statistical findings. *Regular attendance* and *completing homework assignments will be necessary for the successful completion of this class*.

**Course Objective:** At the conclusion of the course, the goal is to have a clear understanding of the fundamental ideas behind statistical testing in Psychological research. As demonstrated by the ability: i) to describe data in terms of mean and variance, ii) to state the research & null hypotheses, iii) to determine which statistical test to use given a scientific question, iv) to determine statistical significance by applying a statistical test, and v) to critically think about interpretation of results.

## **Assignments Overview**

|    | Assignment  | Points                   |
|----|---|--------------------------|
| 1. | <i>Exams</i> . There will be a mid-term and final exam. Exams will be composed of either multiple choice and/or problem sets. If either exam is missed, a make-up exam will only be given with a Dean's note.   | 25 pt each (50 pt total) |
| 2. | Homework. A total of 12 weekly homework assignments will be given over the semester. Assignments will be posted on Blackboard and announced in class at least a week in advance. No late assignments will be accepted. The lowest two grades will be dropped. Thus, only the 10 highest homework grades will count toward your final grade. | 2 pt each (20 pt total)  |
| 3. | Quizzes. A total of 7 quizzes will be given over the semester. No make-up quizzes will be given. The lowest two grades will be dropped. Thus, only the 5 highest grades will count toward your final grade.   | 5 pt each (25 pt total)  |
| 4. | Class attendance. Four unexcused absences will be accepted prior to a grade reduction (1% for each additional day up to 5 days). Regular attendance is advised.   | 5 pt                     |

TOTAL 100 pt

**GRADING**: A (94-100); A- (90-94); B+ (87-89); B (84-86); B- (80-83); C+ (77-79); C (74-76); C- (70-73); D+ (67-69); D (64-66); D- (60-63); F (59 or below)

**Students with Disabilities:** If you have a documented disability and verification from the Office of Services to Students with Disabilities (SSWD), and wish to discuss academic accommodations, please contact me as soon as possible. It is the student's responsibility to provide documentation of disability to SSWD and meet with a SSWD counselor to request special accommodation before classes start. SSWD is located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) (916) 278-7239 (TDD only) or via email at sswd@csus.edu.

**Sac State's Academic Honesty Policy & Procedures:** "The principles of truth and honesty are recognized as fundamental to a community of scholars and teachers. California State University, Sacramento expects that both faculty and students will honor these principles, and in so doing, will protect the integrity of academic work and student grades."

**Definitions:** At Sac State, "**cheating** is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means." "Plagiarism is a form of cheating. At Sac State, "**plagiarism** is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgment. Any violation of Academic Honesty through cheating on exams or exercises and/or plagiarism will be dealt with to the fullest extent possible (i.e. academic and administrative sanctions as outlined in the Manual). For further information please refer to the University Policy Manual on Academic Honesty Policy and Procedures.

|           |      | Lecture Schedule                                |          |   |  |
|-----------|------|---|----------|---|--|
| Date      | Week | Lecture<br>Number                               | Readings | Title, Assignments & Exams                          |  |
| Jan 28, M | 1    | Introduction to the Course and Course Syllabus. |          |   |  |
| Jan 30, W |      | 1   | Ch. 1    | Displaying the order in a Group of Numbers.         |  |
| Feb 1, F  |      | 2   |          | CONTINUED.  |  |
| Feb 4, M  | 2    | 3   | Ch. 2    | Central Tendency and Variability.HMWK#1 due.        |  |
| Feb 6, W  |      | 4   |          | CONTINUED.  |  |
| Feb 8, F  |      | 5   | Ch. 3    | Key Ingredients for Inferential Statistics. QUIZ#1. |  |
| Feb 11, M | 3    | 6   |          | CONTINUED.  |  |
| Feb 13, W |      | 7   | Ch. 4    | Introduction to Hypothesis Testing.                 |  |
| Feb 15, F |      | 8   |          | CONTINUED.  |  |
| Feb 18, M | 4    | 9   |          | CONTINUED. HMWK#2 due.                              |  |
| Feb 20, W |      | 10  |          | CONTINUED.  |  |
| Feb 22, F |      | 11  |          | CONTINUED. QUIZ#2.                                  |  |
| Feb 25, M | 5    | 12  | Ch. 5    | Hypothesis Tests with Means. HMWK#3 due.            |  |
| Feb 27, W |      | 13  |          | CONTINUED.  |  |
| Mar 1, F  |      | 14  |          | CONTINUED. REVIEW HANDOUT FOR EXAM.                 |  |
| Mar 4, M  | 6    | 15  |          | CONTINUED. HMWK#4 due.                              |  |
| Mar 6, W  |      | 16  |          | CONTINUED.  |  |
| Mar 8, F  |      | 17  |          | CONTINUED. QUIZ#3.                                  |  |

| Date      | Week                              | Lecture<br>Number | Readings | Title                                       |  |  |
|-----------|-----------------------------------|-------------------|----------|---|--|--|
| Mar 11, M | 7                                 | 18                | Ch. 5    | Confidence Intervals & In class Exercise #2 |  |  |
| Mar 13, W |                                   |                   |          | REVIEW FOR EXAM.                            |  |  |
| Mar 15, F |                                   |                   |          | Mid-Term Exam Ch. 1-5                       |  |  |
| Mar 18, M | 8                                 | 19                | Ch. 6    | Making Sense of Statistical Significance.   |  |  |
| Mar 20, W |                                   | 20                |          | CONTINUED. HMWK#5 due.                      |  |  |
| Mar 22, F |                                   | 21                |          | CONTINUED                                   |  |  |
| Mar 25, M | 9                                 |                   |          |   |  |  |
| Mar 27, W |                                   |                   |          | SPRING BREAK – ENJOY!!!!                    |  |  |
| Mar 29, F |                                   |                   |          |   |  |  |
| Apr 1, M  | 10                                |                   |          | AR CHAVEZ BIRTHDAY – ENJOY!!!!              |  |  |
| Apr 3, W  |                                   | 22                | Ch. 7    | Introduction to t-tests. HMWK#6 due.        |  |  |
| Apr 5, F  |                                   | 23                |          | CONTINUED. QUIZ#4.                          |  |  |
| Apr 8, M  | 11                                | 24                |          | CONTINUED.                                  |  |  |
| Apr 10, W |                                   | 25                | Ch. 8    | The t-test for independent means.           |  |  |
| Apr 12, F |                                   | 26                |          | CONTINUED.HMWK#7 due.                       |  |  |
| Apr 15, M | 12                                | 27                |          | CONTINUED.                                  |  |  |
| Apr 17, W |                                   | 28                | Ch. 9    | Introduction to the Analysis of Variance.   |  |  |
| Apr 19, F |                                   | 29                |          | CONTINUED. QUIZ#5. HMWK#8 due.              |  |  |
| Apr 22, M | 13                                | 30                |          | CONTINUED.                                  |  |  |
| Apr 24, W |                                   | 31                | Ch. 10   | Factorial Analysis of Variance              |  |  |
| Apr 26, F |                                   | 32                |          | CONTINUED. HMWK#9 due.                      |  |  |
| Apr 29, M | 14                                | 33                |          | CONTINUED.                                  |  |  |
| May 1, W  |                                   | 34                | Ch. 11   | Correlation.                                |  |  |
| May 3, F  |                                   | 35                |          | CONTINUED. QUIZ#6. HMWK#10 due.             |  |  |
| May 6, M  | 15                                | 36                |          | CONTINUED.                                  |  |  |
| May 8, W  |                                   | 37                | Ch. 12   | Prediction.                                 |  |  |
| May 10, F |                                   | 38                |          | CONTINUED. HMWK#11 due.                     |  |  |
| May 13, M | 16                                | 39                | Ch. 13   | Chi-Square Tests.                           |  |  |
| May 15, W |                                   | 40                |          | CONTINUED. QUIZ#7. HMWK#12 due.             |  |  |
| May 17, F |                                   | 41                |          | REVIEW FOR FINAL EXAM.                      |  |  |
| May 22, W | 12:45-2:45pm FINAL EXAM: Ch. 1-13 |                   |          |   |  |  |

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